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ORIGINAL COMMUNICATIONS.

ART. I. *Anti-Vitruvianism.* By CANDIDUS.

IN my article on architectural pedantry (p. 149.) I noticed Mr. Hosking's opinion of Vitruvius, as given in his *Treatise on Building and Architecture*; and I shall now make a few further observations on the same work. Instead of dividing architecture into three distinct branches, viz. civil, military, and naval, he contents himself with saying that, unless otherwise expressed, the term is always understood to apply to the first-mentioned species. Many may consider both the term and definition given to it to be of very little moment; and yet I cannot help thinking it rather unfortunate that the same family appellation should have been bestowed on studies which have no connexion whatever with each other; or, rather, that a sort of relationship should be acknowledged, by formally pointing out distinctions which virtually imply such an alliance between the three as renders specific appellations necessary, in order to prevent the one from being mistaken for the other. It has never been thought necessary to explain that painting is divided into picture-painting and house-painting, notwithstanding such is the poverty of our language, that the gentlemen of the brush in the latter department have as good right to style themselves *painters* as the others. It is true we talk of "building ships;" still ship-building has nothing more to do with architecture, than "to build the lofty rhyme" has; which, by the same analogy, might be termed poetical architecture. I may now seem to be merely jesting; yet I hope that my serious meaning is obvious enough. To me it appears little else than an absurd piece of impertinence, for a writer on architecture to recognise any similarity between his pursuit and the similarly named ones, by any allusion at all to the latter. I may even go further, and think that architecture should be regarded as something, if not perfectly distinct, certainly distinguishable enough from mere building. The former bears, as Mr. Hosking very pertinently observes, the same analogy to the latter as literature does to language. Were I, therefore, called upon to define architecture, I should describe it to be the *poetry of building*. This, in my opinion, would be sufficiently expressive and intelligible, and convey at once what is, or ought to be, the true character of the art, and its pretensions to rank along with the other fine arts.

Such being my views of the subject, I dissent from those who would refer us to utility as one of the primary sources of beauty in architecture. Very far, however, am I from wishing to insinuate that utility ought to be disregarded: on the contrary, I hold it to be of paramount importance that a direct confederacy should be established between these two essential qualities; and that they should mutually aid each other. The definition I have just offered would remove all occasion for farther explanation on this head, were it not that some might wilfully misrepresent my meaning, and contend that I

would fain decry utility, as a very unimportant consideration. All that I intend to say is, that it is a subordinate quality. In spite of many curious examples of the contrary, sense, it is presumed, is considered indispensable to poetry, as is also an attention to grammatical precision: yet no one will say that either the one or the other constitutes poetry.

No one will attempt to deny that a man who may be an excellent grammarian, and who may understand all the different significations of words, and all the rules for combining them correctly into sentences, may be incapable of writing elegantly, even in prose; and yet we are told that it is sufficient for a man to understand the rules of the art, and the practical part of building, to enable him to produce what deserves to be considered a piece of architecture. Nothing can be farther from the fact.

However well qualified in other respects, no man can ever be an accomplished architect, without having the eye of a painter in all that relates to design. So far from coinciding in this opinion, I am aware that many consider, or affect to consider, such talent as injurious; and so it undoubtedly may become, unless properly regulated. By no means do I mean to say that other knowledge may be dispensed with; all I contend for is, that, in addition to it, the architect ought to possess a lively apprehension of, and relish for, beauty. No doubt, there are many who contrive to shift very well without aught of the recommendation upon which I have here insisted; for every day's experience convinces us of this. If, therefore, the argument established upon such a fact be incontrovertible, I must succumb to the weight of overwhelming evidence against me. It will perhaps, however, be found that such evidence makes strongly for my opinion; because, if discipline alone could achieve every thing, we should be surrounded by masterpieces of the art. The truth is, we set out with a fatal mistake at first, and, in consequence of that error, continue embarrassed and perplexed with glimpses of theories to which we can discover no clue. Most incontestably, mechanical rules are indispensable to the architect; yet, to maintain that they are all-sufficient, is nothing short of denying architecture to have any pretensions to rank as one of the fine arts. If it can be proved to admit of no other beauties than those which have already been given to the world, and which may be repeated at will; if it has no latent charms responding only to the call of master minds; why, then, the sooner we undeceive ourselves as to its real nature, the better. Let us honestly admit that the world has been imposed upon, and that henceforth architecture ought rather to be classed with arithmetic, and studies of that nature, than with those pursuits with which it has undeservedly been associated. It is one character of Vitruvianism to attach undue importance to rules, and to inculcate a slavish adherence to precedent; while for criticism it substitutes a pedantic jargon, full of impertinences and puerilities. Almost making a merit of dulness, it discountenances any attempts at advancing a single step forward, repressing genius, and anxious only to preserve respectable mediocrity. Under the most contradictory circumstances, it exacts an observance of precisely the same proportions, and endeavours to impose, as far as it is practicable to do so, one uniform methodical system that prescribes a set formula for every occasion. That every style of architecture must have certain leading rules is undeniable, because otherwise it could be no style at all; yet such rules go to furnish no more than its mere *accidence* and *syntax*; the materials of expression, not the matter, nor, in fact, even that quality which corresponds to what is called *style* in writing and in painting. If such be the case (nor do I perceive how it can very well be denied that accuracy, which consists in no more than a conformity with rules established upon precedent, is in itself but a negative merit, even where it does not happen to be attended by any actual drawback), on this lowest and most plodding species of architectural correctness by far too much stress has been laid, as well by critics as by architects themselves; and in this the indolence of both has found its account; it being so much easier to appear satisfied with what others are content to admire, than either to attempt to advance beyond that, or to

discuss the merits of what does not accord with any previous standard of criticism. When I say that too much stress has been laid upon what is in itself little more than elementary, I must not be understood as by any means advocating a disregard for such minutæ; quite the contrary: I only complain that these are thought all-sufficient; and that, instead of entertaining more enlarged views, instead of showing they are really acquainted with the powers of their art, architects, in general, content themselves with random and piecemeal beauties, and hardly make any attempt at originality.

It is not my intention to accompany Mr. Hosking step by step; but I cannot refrain from exhibiting his anti-Vitruvianism to my readers, and laying before them his opinion of a writer whose precepts have hitherto been recognised as laws. "It will be necessary here," he says, "to disabuse the public mind as to the merits of the works of Vitruvius, whose anilities have so long passed for authorities, that a writer would be suspected of prejudice who spoke of them slightly, without adducing evidence to prove them valueless; except, indeed, as records of the architectural practice, and the opinions and acquirements of an architect of a distant age." "*Valueless*" is, it must be owned, rather a strong expression: let us see, then, if Mr. Hosking can justify it. After objecting to the fables of Vitruvius about the origin of building, the invention of the orders, &c., as, in fact, only proving his ignorance, he thus continues:—"How far his knowledge of antiquity, that is, according to himself, of the works of the Greeks, extended, may be readily determined by comparing the designs of Greek structures, made by Perrault and others, according to the directions of Vitruvius, with the Greek structures themselves, as they exist at the present time, and are faithfully delineated in various modern works, but especially in Stuart and Revett's *Antiquities of Athens*. It is, indeed, not less strange than true, that *not a single example of Greek architecture will bear out a single rule which Vitruvius prescribes*, professedly on its authority; and not an existing edifice, or fragment of an edifice, is, in form or proportion, in perfect accordance with any law of that author; nor, indeed, are they generally referable to the principles he lays down."

This passage, alone, will convince my readers that Mr. Hosking has entered the lists against Vitruvius and the Vitruvianists, with right hearty good-will; nor can they very well doubt of his being a sufficiently bold man; yet will his intrepidity be surpassed by that of his opponents, should they, after this, attempt to vindicate their leader. As to poor Vitruvius himself, Mr. Hosking fairly knocks him on the head with the following *coup de grace*:—"A student would acquire as correct a knowledge of history and geography from *The Seven Champions of Christendom*, and *Gulliver's Travels*, as of architecture from the text of Vitruvius"! No one will accuse Mr. Hosking of dealing in hints or innuendoes, or of exercising much caution or delicacy in attacking firmly rooted prejudices. He evidently does not care to mince the matter at all; and, what is still worse, his adversaries seem to abandon the good cause, and to suffer him to rail with impunity; although the time has been when far less disrespectful language would have drawn down upon its author the most formidable anathemas. Nay, it is strange that some of those critics who took Mr. Wilkins to task for uttering what he did in regard to Vitruvius, should not have denounced so audacious an offender as the writer in the *Encyclopædia Britannica*; more especially as his opinions are likely to continue before the public eye after that, and a thousand other newspaper squabbles, shall have been forgotten. The only excuse to be offered for them is, that such critics are not in the habit of studying treatises on architecture; or else they preferred exhibiting that best part of valour, discretion, which certainly would dissuade them from alluding in any way to so formidable an antagonist as Mr. Hosking.

Our anti-Vitruvianist is, of course, no great admirer of the sexual system of architecture; and he accordingly, with more waggery than decorum, makes himself merry with Doric "gentlemen," Ionic "matrons," and Corinthian

"courtesans;" and with much besides, that he justly stigmatises as "puerilities," and "anilities;" and, to say the truth, few things can be more nauseatingly ridiculous than the mawkish twaddle of this sort, in which many seemingly grave writers on the subject have indulged. Discarding all such systematised nonsense and dullness; and that whimsical mal-a-propos friskiness of imagination, which can behold whatever it pleases, being always ready to exclaim, with Polonius, "Very like a whale!" discarding, we say, all these impertinences, Mr. Hosking is content to speak the language of plain common sense; while he evidently strives to judge as impartially as possible, not claiming, even for his favourite ancients, any thing like infallibility. A warm admirer of Grecian architecture, he is by no means so bigoted to it as not to be able to discern merit or beauty in any other style: on the contrary, he finds much to admire, not only in the various styles of pointed architecture, but in some others which are less generally known, and have been less extensively cultivated. His admiration, however, for the works of the Italian school is exceedingly limited; while, in regard to Palladio and his followers, he is not disposed to treat them much more courteously than he treats Vitruvius himself: neither could he very consistently have done so, since their principles, with regard to the orders at least, are mainly founded upon the doctrines of that writer. It must be admitted, indeed, that Mr. Hosking does not suffer himself to be imposed upon by great names; names which, to vulgar ears, sound as so many synonymes of excellence. Nor do I quarrel with him for this sturdy independence; because I myself entertain no very great reverence for many whom it is the custom to wonder at, and because I would set my face against all that learnt-by-rote admiration which has not even the merit of being sincere. Even Michael Angelo himself does not escape Mr. Hosking's lash; for he does not scruple to affirm that he had "a very bad taste in architecture," and that "to him may be attributed many of the bad qualities of the Italian style." Again, he says that "his principal works are all distinguished for their singular want of architectural beauty and propriety, in every particular."

With equal, and certainly not misplaced, severity does he express himself in regard to Palladio, whose taste is generally considered so unimpeachable, that some curiosity will be felt to know what defects our critic can detect in him. "Palladio," observes Mr. Hosking, "made greater use of insulated columns than the Italian architects generally; but his ordonnances are deficient in every quality that produces beauty: his porticoes may be Vitruvian, but they certainly are not classic. His columns upon columns, his attached and clustered columns, his stilted post-like columns, his broken entablatures, his numberless pilasters, straggling and unequal intercolumniations, inappropriate and inelegant ornaments, circular pediments, and the like, are blemishes too numerous and too great to be passed over, because of occasional elegance of proportion, or beauty of detail." Little flattering as it is, this picture is by no means overcharged, as might easily be shown had I room to enter into particular criticism. Even Robert Adam, whom no one will accuse of overweening predilection for classic authority, or of excessive rigorism in design, has spoken most contemptuously of the celebrated Teatro Olimpico; which, bad as it is, has at least the merit of being tolerably consistent in its puerilities and absurdities. That the sneaking cowardly affectation of would-be critics and admirers has contributed, in a great degree, to bolster up his reputation admits of little doubt; particularly when we find the so much cried up façade of the house he built for himself copied in Suffolk Street, without attracting notice for any beauty whatever. So far am I from wishing my readers to take me at my word, that I desire nothing better than they should attentively examine for themselves any collection of Palladio's designs. Or, should they happen to have Mr. Hosking's book, let them turn at once to the plate which exhibits the Villa Capra, generally allowed by the "great" architect's admirers to be one of the most elegant and most perfect of his productions. Without animadverting upon the

wretched meagreness of the order altogether, which it is impossible to recognise as Ionic, save by the voluted capitals, can any thing, I ask, be in more detestable taste than the two oval window-holes in the tympanum of the pediment, with the hideous armorial shield between them? Or can there be any more disgusting disproportion than that disproportion of character which prevails between the different features and apertures generally? Meanness and pretension go hand in hand throughout the whole.

ART. II. *Essay on the Metaphysics of Architecture.*

By J. DOWSON, Esq.

EVERY one who has studied the nature of his own mind, or been accustomed to watch its operations, knows how great an influence external objects exercise over its powers, even when it is not particularly dwelling upon them. He knows how the objects before his view become insensibly associated with whatever thoughts may be passing through his mind, and produce, according to their nature or appearance, a degrading, an exalting, or a beautifying effect upon his ideas. Thus, in recalling the thoughts which have engaged him at some particular time, he also generally recalls the scenes or objects which were before him at that time; or, in recalling the scenes to his memory, he also recalls the thoughts that attended them, though no necessary connexion might have existed between them; and he finds that his thoughts have become ennobled and enlarged by their association with magnificent scenery, or that they have become degraded and contracted by association with inharmonious and mean scenery or objects. All this, I say, will be known and felt by him who has studied the nature, or watched the operation, of his own mind. But not only by him will it be felt, but, also, by all those who have minds that can enjoy the beauties of nature, or the charms of art. They find that their ideas become purified, raised, or expanded, according as they are surrounded with that which is beautiful, harmonious, or high. And he who unites with this sensibility a philosophic mind, will delight to surround himself with the beauties and sublimities of nature and of art: not that he may sit for hours to contemplate them, but that, by their association with, they may give to, his thoughts and imaginings a higher and purer character, and vigour to reach, and power to grasp, things of higher import, to expand his views of existence, of the wisdom and power of God, and of the mysteries of nature and of mind. And this power over us, belonging to external things, may be easily accounted for. We know that without ideas we could not think at all, for they are the materials for thought; and we know, also, that all ideas are, in the first instance, communicated to us through our senses: of course, I mean here, by ideas, only those which are of matter, and not those which arise from reflection upon our own feelings of existence and identity, and thence upon the nature and attributes of spirit; although these, however abstract they may be, will always associate themselves in our minds with ideas or images drawn from matter. Of the ideas which we receive through our senses, we may, indeed, form almost an infinite number of combinations, differing from every thing we may see around us; yet still they are only combinations whose beauty and elevation must depend wholly upon the quality of our materials, and our power to use them. Thus, then, must our minds continually be under the influence of external objects; the scenes around us becoming, as it were, the *pedestals* upon which our souls naturally exalt themselves to take a view of the things beyond; their view being, consequently, enlarged or diminished, according to the height which they thus ascend. Ideas may be called the atmosphere, as well as the food, of the soul; upon the quality and purity of which depend its vigour, and the loftiness of flight which it can take.

Seeing, then, that such is the effect of external objects upon our intellect,

it becomes a matter of great importance that we should so regulate the order and appearance of those things which are within our power, that they may produce a favourable influence. Of those things is architecture; an art which, in my opinion, is less understood, and worse practised, than any other; as our great cities, towns, and public buildings only too clearly prove: but of this anon.

Architecture, as an art, may be compared to music and poetry. Like them, it requires a vivid imagination, and an exquisite sensibility to the beautiful and sublime. Yet it is an art of far greater importance than either music, poetry, painting, or sculpture; for from all these we can escape, if the impressions which they cause be displeasing; but how shall we escape from the impressions received from architecture, unless we banish ourselves from society, and live only amongst the unassisted productions of nature?

Such, then, being the importance of architecture as art, it becomes pre-eminently desirable that architects, nay, indeed, that all persons possessing the least sensibility, should well understand those principles by the application of which beauty and sublimity may be produced in its works, not only in single buildings, but in whole streets — yea, cities — to such a degree, that the united effect of the structures may be harmony without monotony.

Architecture, in every gradation of style, may be classed under these four denominations: the Beautiful, the Sublime, the Grand, or the Magnificent.

Of the Beautiful in architecture, we draw our ideas from the works of the Great Architect of Nature, and from the tastes which He has given us. Yet there are four principles, Grace, Expression, Proportion, and Harmony, which are absolutely necessary to its perfection, and an infringement of them will invariably produce a harsh and revolting effect. But, as beauty in nature is infinite in variety of character, so in architecture it would be absurd in the highest degree, to attempt to establish rules or standards which should limit, to certain prescribed principles, the power of producing all that can be called beautiful in it. Yet, as far as the beautiful comes within the cognizance of our reason, we may affix rules which can never be departed from without destroying it. The attributes of Grace and Expression can hardly be said to come within these rules, but must be principally judged of as to their analogy with the forms of nature. By grace and expression, I mean those indefinable principles by which we form and arrange the various members of architecture, so as to charm the eye, in addition to the pleasure produced by proportion and harmony of parts; and without which all that would be produced by the latter would be dulness or monotony. These are what may be said to give to any style of architecture its peculiar character and expression, accordingly as they are applied; and I think they are more particularly analogous to grace and expression in the human form and countenance. The principles of Proportion and Harmony come more immediately within the cognizance of our reason, and may easily be decided upon. Proportion is that by which we regulate the size of the various members, with regard to each other, so as to produce symmetry in the whole. To illustrate the importance of this to the production of beauty in a whole, let us suppose a large column to be raised to support something very light and mean in comparison: how revolting this would be to our common sense! and let the grace and proportion of the column itself be ever so beautiful, yet all its effect would be lost in the ludicrous idea presented by its disproportion to the thing which it supported. Harmony in architecture is the agreement of the character of its various parts, and a unity of expression and purpose in the whole. To illustrate this, we have only to suppose a structure in which lightness and heaviness of expression, simplicity and intricacy of style, contend together in grotesque confusion; and we shall see at once what is meant by harmony, and how the want of it annuls all beauty.

Of the various styles of architecture, and of their various capabilities of beauty, it is impossible to say much in a short essay. The Gothic style is, in my opinion, capable of the highest degree of lightness of effect, and the

greatest intricacy and variety of beauty. Its multiplicity and variety of members and mouldings, and the weaving and intersection of its lines in vaultings, &c., being so analogous to the union of the foliage and branches of vistas of trees, give great scope to the fancy in producing variety and agreeableness of effect. Yet, in the generality of the exteriors of our Gothic structures, there is so much heaviness and confusion, that we seldom see any effect produced by them, saving that of grotesque piles, elaborate in the confusion of small carvings: and yet these are much admired by some persons; for which I can only account by supposing their admiration to arise from the association of such buildings with their ideas of the past times of their country, over which, however barbarous they were, romance has thrown a charm.

The Grecian style is capable of a much higher order of beauty than the Gothic. Its columns, the proportions of which are taken from those of the human form, are remarkable for their exquisite elegance and grace; and the members of its various orders, when properly applied, and their proportions properly observed, produce the most perfect symmetry and beauty. Yet it is not capable of much variety of beauty; and, when any attempt is made to make it elaborate, or intricate in effect, its beauty becomes in a great measure destroyed, as it is characterised chiefly by its graceful simplicity of form.

Of the Egyptian style I need not speak under the head of beauty, as its characteristic heaviness and monotony render it incapable of it to any very great degree. Neither is it necessary that I should speak of the other styles which are practised; for the characters of all, I believe, assimilate, in some degree, to one or other of those which I have already mentioned; and, if they do not, their qualifications for producing beauty must be judged of in the same manner.

Sublimity may be said to consist in the high and the awful. In architecture, vastness of design, with largeness of parts to correspond, will produce this effect. To illustrate this, let us imagine rocks piled upon rocks, as columns, to a great height; let us imagine whole arcades of supporting arches of like ponderosity; and the effect will be that of the sublime. Yet smallness of parts, in a structure of this kind, would destroy such an effect, let the structure itself be ever so large; and the explanation of this is simple: your eye receives only the effect of a multiplicity of small things; and, as littleness is the very antipodes to the sublime, the effect of the whole, as to its size, is destroyed.

We can easily see, from this description of the sublime, how far the styles of architecture already spoken of are capable of it.

The Gothic, from the smallness and multiplicity of its parts, is the least adapted for its production; for, however large a structure in that style may be, still must its members be small in comparison to the whole; although, in the depth of its shades, and the boldness and loftiness of its arches and groinings, it may be produced to a very high degree. The Grecian style is capable of it to any extent. Its proportions are such, that, let the scale upon which it is practised be small or large, to any extent, it will always appear only as a whole: here there is no complexity of lines, or profusion of ornament, to distract the eye. The columns are so simple, though fine, in their contour, and so proportioned in their distances from each other, and to the entablatures which they support; or, rather, their entablatures are so proportioned to them, and the various members of that entablature to itself; and the whole of any of its orders is so perfectly symmetrical; that, let it be enlarged to any extent, still must that order, with all its members, produce the effect of a whole; and, therefore, we conclude that it is capable of any height of sublimity. Even its columns themselves, independent of what they might support, would produce that effect, such is the nobleness of their form. Of the capabilities of Egyptian architecture for producing the sublime I scarcely need speak, as it will be seen at once, from what I have already said of it, that, although it is not capable of any very high degree of

the beautiful, yet it is, from the largeness of its parts, capable of the highest degree of sublimity.

Grandeur in architecture is produced by the union of the beautiful and the sublime. From this will be apprehended, at once, the various capabilities of the styles already mentioned to produce such effect. The Gothic is little capable of grandeur of effect, from its possessing in so small a degree the attributes of the sublime. The Grecian is capable of it in the highest degree, from being capable of the most exquisite beauty, and the highest sublimity; and the Egyptian is capable of it in a much less degree, from its comparative deficiency in the elements of beauty.

Magnificence is only a higher degree of grandeur; for, as grandeur is the union of beauty and sublimity, so is magnificence; only, to produce it, beauty must become more beautiful, must be highly enriched with appropriate ornament, must be luxuriant in grace, and possessed of the highest finish of execution.

Having now spoken, as briefly as I think consistent with a short essay on architecture, of the constituents of its beauty, sublimity, grandeur, and magnificence, and of the capabilities of various styles to produce these effects, it now remains to be shown how they are to be produced in whole streets and cities, to as perfect a degree as in single buildings: and this may be shown very briefly. It will be remembered, that, at the beginning of this essay, I gave it as my opinion, that architecture was an art less understood, and worse practised, than any other; and that I referred for corroboration to our great cities, towns, and public buildings. Of the last I shall now say nothing, as I think that what has been already stated, if properly applied, will show how far the generality of them fall short of what they ought to be. Neither is it necessary, after what I have before mentioned, that I should dilate on the particular buildings of our cities and towns; therefore, I shall proceed at once to speak of their streets. Here, in one street, we find the houses each in a different style; some high, some low, some projecting, some retreating. Every thing is in the "most admired disorder;" and the effect of the whole is confusion worse confused. It is true that there are some, yea, many, streets which produce a much more harmonious effect: some which, in comparison, may even be called beautiful. Yet, to balance this, there are others, and their number is very great in comparison with the rest, the effect of which is even worse than that which I have mentioned; and, if we take a more extended view of a city or town, we shall see nothing but confusion, and a total want of harmony and beauty. The effect of almost all that of a mass of indifferent or ugly buildings, jumbled together in any way that chance might direct. But let us take a view of Rome, or of any of the cities of Greece, as they are exhibited to us in pictures, either in ruins, or with their grandeur restored. How magnificent do they seem! We feel elevated as though we listened to some sublime and harmonious music. And what is the cause of this effect? Not the touches of the artist who represents them; for it is felt even in representations which fall short of the reality; and representations of our own cities, even when set off by all the powers of the artist, will not produce such an effect. Then what is the cause of such difference? It is easily discovered. The buildings of Greece and Rome are all in one style, and, therefore, they harmonise with each other. That style possesses in itself all the attributes of the beautiful and sublime; and, therefore, when correctly practised, its whole effect is that of magnificence itself.

Yet some of our architects are continually employing the Grecian and Roman orders in their structures; and they copy most exactly their proportions as observed in the various temples. They can show you that what they have done is taken, to a nicety, from the Temple of Jupiter Stator, or Minerva Polias, or some other temple. Then why is it that we see not the effect produced by their works, that we see produced by those celebrated structures? A child might tell the cause, did he know the circumstances. They copy columns and their entablature to make a portico, which they will

place on the side, or the end, of a building with which it shall have little in common.

Thus, then, to render our streets beautiful, each building must not only be beautiful in itself, but must also harmonise with the rest; and in each street there must be but one style and one character. Thus, also, in a whole city or town, though various styles and orders may be used in its streets, yet they must all be so arranged as not to intrude upon one another, and cause confusion. It will be seen at once, that, if the Grecian style, pure and well applied, predominate in such a city or town, the general effect will be grand and magnificent; while, if Gothic predominate, the general effect can be little more than that of the mere beautiful and rich; or, if Egyptian, that of the ponderous and sublime.

I should appear very extravagant, were I to speak of pulling down our cities, and of rebuilding them according to these principles. Yet I am not afraid to say that the incalculable expense and labour which such a proceeding would require, would not be greater than the benefits which would accrue from it to our minds, in refining and exalting our ideas. Perhaps there are few who will coincide with me in such an opinion; but, however that may be, I shall conclude with expressing my hope that, before long, our ideas will become so refined, and our sensibilities so acute, with regard to architecture, that we shall not be content until we have none of its works around us but those that are either grand or beautiful.

ART. III. *On the successful Designs for the Houses of Parliament.*
By B.

At length the successful designs for the Houses of Parliament are placed in the National Gallery; and, if the public have felt disappointed at not seeing them at the opening of the exhibition, they will now, no doubt, feel still more disappointed when they see the extraordinary manner in which the three minor premiums have been awarded. In my last communication, I stated what I conceived to be the reason for there not being more competitors; at the same time, I suggested the possibility of this competition being conducted with impartiality. The result of the decision of the commissioners will answer for itself.

There can be very little doubt, I think, of the justness of the decision with regard to Mr. Barry's design. It possesses the characteristics of Gothic architecture, particularly in the interiors, and is, on the whole, a very grand design. If a fault can be found, perhaps the river front requires more variety in its general outline: for, it must be remembered, it will be a very extensive façade, and one that will become, after one general view, monotonous, and very unsatisfactory to the eye, from its extreme simplicity. I conceive that a large building, like a large picture, should develop its whole outline at once, from a certain distance; but a step closer, or a more minute examination, should rather increase than diminish the curiosity of the observer to examine the more subordinate parts. If the interest of the spectator in viewing a building is not kept up by a certain degree of variety and intricacy in its bolder parts, and every part is seen at one view, simplicity verges on monotony. A great quantity of elaborate tracery placed on a flat surface gives no variety, as it cannot produce large masses of light and shade; therefore a general composition cannot be dependent upon mere ornament for its beauty; and, perhaps, by dispensing with mere decoration, a better opportunity would be given for testing a design as a whole. Thus much I have thought it necessary to say with regard to the river front of Mr. Barry's design. The west front is infinitely better; but in the elevation a great deal more is shown than can possibly be seen in one view, which gives a grandeur to this elevation that it will not

possess when executed. Thus the Speaker's house, which is a considerable distance beyond Westminster Hall, and Westminster Hall, are shown to the same scale as the new fronts to the Law Courts, giving a view of the design which will never be obtained. The north and south fronts are very beautiful, particularly the south front, with the increased decoration of Westminster Hall, and its increased length. This front is more in harmony than the north; which, by the great decoration of the new parts, injures the effect of Westminster Hall. Of the interiors I need say very little; they are highly decorated, and a true spirit of Gothic architecture pervades the whole.

Mr. Buckler's design comes next agreeably to the arrangement of the commissioners; and it is distinguished by a buckle suspending the letter R. The commissioners report, "that the elevations are deserving of much commendation, although, from the number of projections and recesses, which give a broken character to the river front, it is much more difficult to judge what its effect would be when finished, than any of the drawings in plan 64. . . . These objections, joined to others more important, which relate to the ground plan," &c. From these observations of the commissioners, it may be presumed that they had no idea of a medium between extremely simple and extremely intricate; and that this design has been chosen because they have objections to both the plan and the elevations. There is a decided want of repose in this design, and the composition is altogether of a very ordinary description, many of the rejected designs being very far superior. I will merely refer to the sections of the two houses, which are mere barns. I think it decidedly inferior to Mr. Hamilton's, bad as that is.

Mr. Hamilton's design comes next: this is Elizabethan, or what is so termed; but it partakes more of the style which prevailed in the end of the reign of James I., and the beginning of the reign of Charles I. There are some good parts about this design, and the river front would look as well as this style would permit. The interior views of the houses are also good in their way; but the design of Mr. Rhind, hanging opposite, is certainly better, as are several other Elizabethan designs. The arrangement of the plan is certainly not the most convenient.

We come now to Mr. Railton's design, which the commissioners appear to have chosen because "it is inferior to none in attention to the instructions and specifications delivered to the competitors." This is the only reason the fourth premium has been awarded to Mr. Railton. It is a very confused production; and shows that the artist possesses very little knowledge of Gothic architecture, which the interior views of the houses very clearly show.

Leaving Mr. Barry's design out of the question, it is impossible to conceive what could have induced the commissioners to select the designs of Buckler, Hamilton, and Railton, when there are so many in the exhibition so far superior to them, both in point of general arrangement of the plans, and knowledge of Gothic architecture in the elevations; and yet the commissioners could not find another design deserving of the fifth premium! What is their excuse? "We have found the merits of several so nearly balanced, that, unable to give a preference, we feel ourselves called upon, in justice to the parties, to abstain from any further recommendations." So ends this grand competition, that was to be decided by the most skilful *amateurs*, in the most impartial manner, so as to reflect honour on the commissioners for their ability in deciding upon the merits of an art which requires the utmost perseverance and patience, and greatest portion of the lives of its professors, to obtain a knowledge of it. So ends all confidence in public competition. But architecture will rise, in spite of this most extraordinary decision. A time must soon arrive when amateurs will not be called upon to decide upon an art so intricate; and, if an opportunity occurs again for a public competition of consequence, a public exhibition will take place before the designs are decided upon.

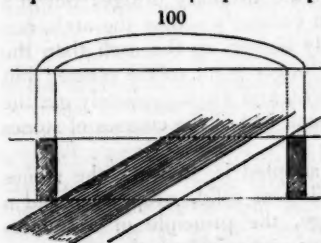
London, May 7. 1836.

ART. IV. *On the Construction of Skew Arches.* By CHARLES FOX, Esq.

The following essay is that referred to in p. 239., as having been read at a meeting of the Institute of British Architects in March last, and published in the *Philosophical Magazine* for April. We applied to Mr. Fox, and to the proprietors of the *Phil. Mag.*, for permission to publish it here, conceiving the subject, at the present time, when so many railroads are going forward, to be of very great importance. Our request was kindly and liberally acceded to at once, both by Mr. Fox and the other parties concerned.

SKREW bridges have hitherto been comparatively little used; but, since railways have been introduced, in which it is highly important to preserve as direct and straight a line as possible, they are very frequently required, as a railway passes through the various districts without the possibility of regarding the angle at which it may cross canals and roads, its course being, in great measure, controlled by the natural features of the country.

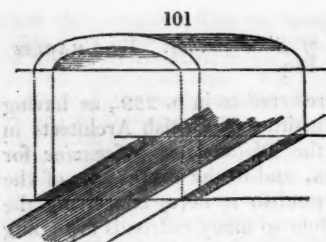
Wherever a canal is thus crossed at an angle, we must either divert the canal, so as to bring it at right angles to the railway; or we must build a common square bridge of sufficient span to allow the canal, its course being unaltered, to pass uninterruptedly under it; or we must erect a proper skew bridge. The first of these is often impracticable, as provisions are generally inserted in the acts of parliament for preserving the canal from any alteration in its course; and, even if this were not the case, the diversion of the canal causes great expense, and is attended with much inconvenience to its traffic: the second is a most unscientific mode of overcoming the difficulty, and would also involve very serious expense, arising from the necessity of making use of an arch of much large dimensions than would be required were the proper oblique arch erected in its stead. By



referring to *figs. 100. and 101.*, this will be apparent: for this diagram I have selected the angle at which the London and Birmingham Railway crosses the Grand Junction Canal, being an angle of 30° . It is for the above reasons that oblique arches are now so frequently erected; and a good method

of building them is, therefore, of considerable importance.

As many practical men with whom I am acquainted have experienced considerable difficulty in the construction of skew



bridges, I was led to turn my attention to the subject; and have, at length, succeeded in rendering the principles of it easy to be understood.

All persons are acquainted with the manner in which common square arches are built, where all the courses are square to the face, and parallel

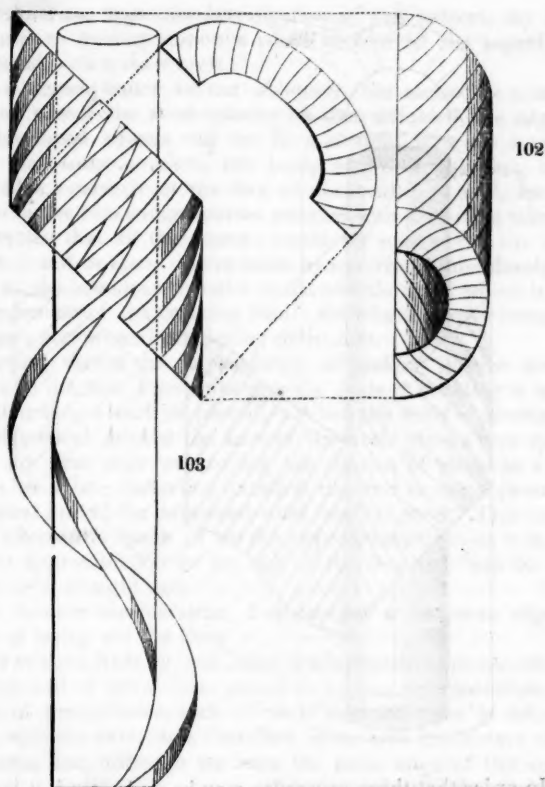
both to the direction and surface of the road or river running under it, by which means the thrust, or strain, is always at right angles to the joints, or beds, of the individual stones composing the arch; hence the whole thrust of ordinary arches, which is brought in upon the abutments, is exerted in the direction of the bridge itself, that is, of the road passing over it.

To devise some simple mode of setting out and working the courses of stone in a skew arch, so as to bring in the thrust in the proper direction, was the great object to be obtained. All practical men are aware of the vast difference between having to deal with straight and with twisted lines; and the necessity of introducing twisted lines in the construction of skew bridges will soon be seen.

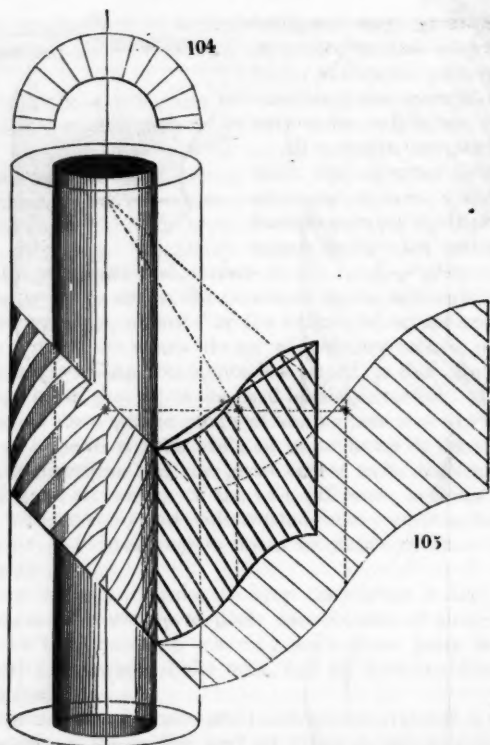
In skew bridges, in order to keep the thrust in the proper direction, it is necessary to place the courses of stones at an angle with the abutment, whereby each stone loses its parallelism with the surface of the road, and is, therefore, laid on an inclining bed.

In a common semicircular arch, each course of stones is parallel with the axis of the bridge, and all the beds are wrought so as to point to the axis: the inclination of the stones varies in every course; but, although the inclination of the stones varies in every course, both ends of the course have the same inclination, both ends are equally high in the arch, and both ends point to the centre. This is the case in the ordinary bridge; but in a skew bridge, as the courses run obliquely across the arch, one end of the course is necessarily higher up the arch than the other, and, therefore, would no longer point to the centre; but only *make this point to the centre*, and we immediately get the twisted form; that is, we make each bed of the courses of stones a true spiral plane.

The principle which I have adopted is, to work the stones in the form of a spiral quadrilateral solid, wrapped round a cylinder, or, in plainer language, the principle of a square-threaded screw: hence it becomes quite evident, that the transverse sections of all these spiral stones are the same throughout the whole arch. It will be obvious, that the beds of the stones



should be worked into true spiral planes; but I am not aware that any rule has yet been published that would enable the stones to be wrought at the quarry into the desired form, or of any rule by which the true angle at which the courses cross the axis of the bridge is determined. *Fig. 103.* is a representation of the courses of the stones, each alternate course being omitted in order to show their form more distinctly; and the course forming the key-stone is carried out so as to show that it really is the thread of a square-threaded screw wound round a cylinder, the cylinder being indicated by the two dotted lines. If the threads are cut at right angles to the cylinder, the section would appear as in *fig. 104*; if cut at right angles to the courses, or as nearly so as the case will admit of, as they are really cut to form the face of the bridge, the section would appear as in *fig. 102*.



In order that these principles may be understood, it is necessary to have a clear idea of the nature of a spiral plane; and, perhaps, the best definition of it is, to consider it as being produced by the twofold motion of the radius of a cylinder; that is, let a radius revolve upon its axis at a uniform velocity, and at the same time impart to it a progressive motion along the axis itself; and then, by apportioning these two motions to the particular case, you will obtain any spiral you may desire: hence it is apparent, that the outer edge of a spiral plane is produced by a straight line wound round a cylinder, every where forming the same angle with the axis; while the inner edge actually merges into the axis itself, which, of course, is a straight line. The question which now naturally suggests itself is, how to decide at what angle to place these spiral stones with respect to the axis of the bridge, or, in mechanical language, what traverse must we give the screw?

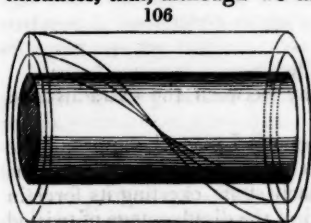
In entering upon the investigation of this subject, my first idea was to develop upon a plane surface all the superficies connected with a skew arch.

If a semi-cylinder be cut obliquely, the section is a semi-ellipsis; and if the semi-cylinder be then unfolded, the edge of the developed ellipsis will not be a straight line, but a spiral one; and some builders, not being aware of this fact, have squared a course from the face of the centring; and, having drawn in the remaining courses parallel with this, have taken it for granted that all the courses would be square with the face, which, it will be seen, is impossible by referring to the development of the intrados, or under surface of the arch, which is the developement of the centring itself: they have hereby been led into very serious and perplexing difficulties.

Having shown the impossibility of making *all* the stones square to the face, I will now give the mode of deciding in what direction they should be placed. When the soffit is developed, the edge which formed the face of the arch gives a true spiral line: my first plan was to lay the courses of stone at right angles to a line extending between the two extreme points of the spiral line of the developed soffit (see *fig. 105.*). This line I shall afterwards speak of as the approximate line, as it is the nearest approximation to the line of the face that can be obtained by a straight line.

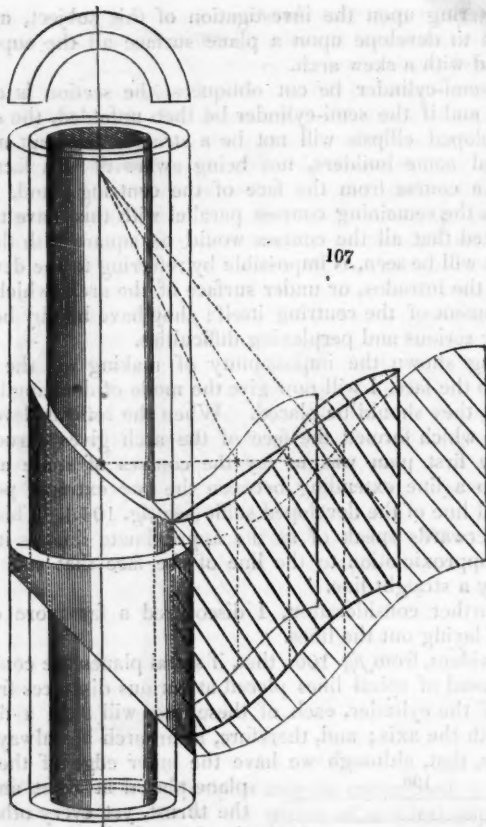
On further consideration, I discovered a far more eligible mode of laying out the lines.

It is evident, from *fig. 106.*, that, if spiral planes are considered as composed of spiral lines placed at various distances from the centre of the cylinder, each of these lines will form a different angle with the axis; and, therefore, as an arch has always some thickness, that, although we have the inner edge of the spiral



plane placed at right angles to the thrust, yet every other portion is gradually departing from a right angle, and is, therefore, exerting its force in an improper direction: thus an arch of this description can never exert its thrust in the direction of the bridge, but is endeavouring to push the abutments obliquely.

To get the thrust strictly correct, I have supposed the arch to be cut into two rings of equal thickness (see *fig. 107.*); and, having considered the external ring as removed, have proceeded to develop the outside surface of the remaining one: this I shall hereafter speak of as the intermediate development, as it is the



development of a surface midway between the extrados and soffit or intrados.

Upon this intermediate development I place the approximate line, and then draw all the courses square to it; by which means we obtain a line in the *centre* of each stone exerting its force in the true direction, and thus get rid of the disadvantage of twisted beds to the stones; as in proportion as the one half of this bed exerts its force in an oblique direction on the one hand, the other half acts in the opposite direction, and is, therefore, always producing a balance of effect, which resolves the various forces into one exerting all its power in the true direction, which is the object to be obtained.

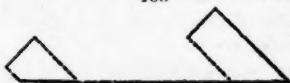
Having explained the mode of setting out the beds of the

stones, a little may now be said on the situation of the cross joints: by these will be understood the joints between the various stones constituting a complete course.

Where an arch is built of stone throughout, the situation of these joints is of minor importance; but, where stone is expensive, it is common to make the faces of the arch only of stone, filling in the intermediate space with brickwork; as in these instances the cross joints form the boundary between stone and brickwork, it becomes a point of considerable importance. This is the case in the Watford viaduct: each stone, here, is equal in thickness to five courses of bricks, so that there are five thicknesses of mortar in the brickwork to one in the stone. Mortar always is compressed into a smaller compass when the centring is struck, and the full weight of the arch comes upon it. In consequence of this tendency, that portion of arches constructed of brickwork always subsides much more than the stone. In an arch where stone and brickwork are combined, little reliance should be placed on their connexion, as this is always more or less disturbed after the centring is removed; so that we should endeavour to construct each portion of the arch with its bearing surfaces, or beds, as nearly equal as possible.

In the first models, the soffits of all the stones were made of an equal length, considering that this would present the best appearance; but this method rendered the bearing surfaces

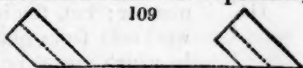
108



very unequal, as will be seen by *fig. 108*; the equal lengths being indicated by the dotted lines.

This difficulty is overcome by this simple means: instead of having the stones of equal length on the soffit, they are made so on the intermediate development; and then the areas of the bearing surfaces, or beds, of the stones are all equal (see *fig. 109*).

109



Having given the mode of laying out the lines, I will now proceed to the practical part, viz. the working of the individual stones.

My first idea was to commence by working the soffit; and this was the mode employed:—

Having obtained an elastic mould cut to the angle at which the joints of the soffit cross the axis of the bridge, the workman, by means of this, gets an oblique line on that surface of the stone which he intends for the soffit. It will be understood from *fig. 110*, that this oblique line thus obtained will be parallel with the axis of the bridge. The workman then proceeds to chisel out a groove (or what is by masons called a chisel-draught) along this line, of sufficient depth for what he knows will be required for the hollowing of the stone.



110

He then takes two wooden moulds (one of which is shown in *fig. 111.*), which are portions of the same circle as the soffit itself. A mark being placed upon the centre of each of these moulds, the workman then proceeds to sink them into the stones at right angles to this chisel-draught (see *fig. 110.*), and in such a manner that the centre marks shall be in the chisel-draught, and the upper edges of

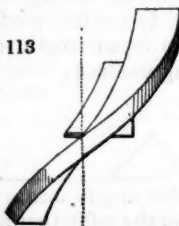


the moulds, which are straight, shall be in the same plane, or what is commonly called out of winding. It will now be obvious, that these two last grooves will form true portions of the soffit itself, and, therefore, that the workman has nothing to do but to work out the remainder of the stone with a straight-edge, always kept parallel with the first draught, and sunk to the bottom of the two draughts which were worked by the curved moulds. Having obtained this hollowed surface, an elastic mould, of the exact size of the soffit of each stone, is pressed into it, by which the stone being marked, we obtain all the lines of the soffit itself.



112

It will now be quite evident, that the beds may be obtained by making use of a square, one limb of which shall be made to the curvature of the soffit, and the other the radius of this curve; always taking care that this square is kept at right angles to the axis, as will be seen in *figs. 112, 113, and 114.*



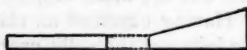
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114

The first few stones were wrought in this manner; but, finding it very difficult to prevent the workman from getting his soffit a little on one side, by which means he wasted much of the stone on one bed, and rendered the other deficient, I had recourse to a method which I will describe. Having provided two straight edges, the one parallel, and the other containing the angle of the twist (see *fig. 115.*), we proceeded to work one of the beds by chiseling two draughts along the stone; so that these straight edges, being kept at a proper distance from each other, were let into the stone until they were out of winding on their upper edges.

115



Having finished one bed by straight edges, we then obtained the soffits and other beds by means of the square before mentioned. By working a bed first instead of the soffit, the best will always be made of a block of stone.

As we have before seen that all the stones constituting a skew

point *o* draw the straight line *o l*, and also from *p* to *m*: it will be seen that *o l* is the approximate line of the developed soffit, and *p m* that of the immediate developement. Add *q*, *r*, and *s*, which are the centre lines of the three developements.

It will be seen, that, when these developements are placed as in an arch, these three lines, *q*, *r*, *s*, being parallel with the axis, will be in a plane perpendicular to the axis, and, therefore, that all the points in each spiral will be vertical with the axis, and also with one another.

Through any point in *p m* draw a straight line (*v*) at right angles with *p m*, which straight line shall extend to the axis of the cylinder.

At the point where it intersects *r*, a line (*t*) perpendicular to the axis intersects *r* also: this last perpendicular line cuts the three lines *q*, *r*, *s* at the points where the lines *u*, *v*, *w*, which meet in *x*, intersect *q*, *r*, *s*.

The joints are then drawn upon the three developements parallel with the lines *u*, *v*, *w*, and at such distances, that the lines *q*, *r*, *s* shall be cut into equal parts. Of course, care must be taken to divide the approximate line of the soffit into a given number of stones. The angle *x* will be that which the intrados form with the axis of the cylinder, and the angle *u w* will give the wind of the bed. On this principle, and by the rules here given, it is nearly as easy to work the stones of a skew bridge as those of any other.

ART. V. *A Series of official Documents relating to the Competition Designs for the new Houses of Parliament; including the "Report of the Commissioners," and the "First and Second Reports of the Select Committee."*

[THE great interest which continues to be taken in the designs for the new Houses of Parliament, and the wishes of several of our readers, have induced us to determine on reprinting in this Magazine the principal public documents respecting these designs; but, in order that our doing so may intrude as little as possible on the miscellaneous contents of the Magazine, we have employed a smaller type.]

1. *Report from the Commissioners appointed by his Majesty to examine and report upon the Plans which might be offered by the Competitors for rebuilding the Houses of Parliament.*

To the King's most excellent Majesty. Your Majesty having been graciously pleased, upon an address from the Lords Spiritual and Temporal in Parliament assembled, to issue a commission under the great seal, bearing date at Westminster, the 17th of July, in the sixth year of Your Majesty's reign, authorising and directing any three or more of the commissioners therein named to examine and report upon the plans which might be offered by the competitors for the rebuilding of the two Houses of Parliament, and to select and classify such of the plans, being not less than three, or more than

five, in number, as shall seem to them most worthy of attention ; and to state, if required, the grounds upon which such selection and classification are founded ; and to make their report on or before the 20th day of January, 1836 ;

We, Your Majesty's commissioners, who have hereto set our hands and seals, humbly submit to Your Majesty, that, from the hour we entered upon our duties, we used every possible exertion to complete our examination within the period limited by the commission ; the conviction, however, of our inability to effect this object, and do justice to the competitors by giving as full a consideration to the designs submitted to us as their number and importance required, induced us to pray Your Majesty to extend the time for making our report.

Your Majesty having been graciously pleased to accede to our request, we are now enabled, with more confidence, humbly to lay before you the result of our deliberations on the merits of the 97 designs, containing from 1000 to 1200 drawings, which have been submitted to us from the Office of Woods and Forests. In performing this duty, we trust we may be allowed to express the satisfaction we feel in being able to report to Your Majesty the good effects which, in our opinion, have resulted from the competition ; since, notwithstanding the limited period to which the architects were confined to send in their designs for a structure so unusually complicated, extensive, and important, they have, in the execution of their undertaking, evinced zeal and ability sufficient to justify the expectation that the art will be substantially benefited.

Restricted as the competitors were with respect to time, it would have been unreasonable to have expected drawings altogether more elaborate and correct ; nevertheless, we are bound in justice to them to state, that, in their memoranda accompanying their designs, several have expressed their regret that they were prevented by that circumstance from making such alterations as from time to time suggested themselves in the progress of their work. Although we consider it unnecessary to trouble Your Majesty with a detail of the rules we laid down to guide us in our selection, still it may be proper to observe, with respect to the two Houses of Parliament themselves, that, with the imperfect knowledge we profess on the theories of sound and artificial ventilation, we deemed ourselves scarcely authorised to allow those subjects to have weight in determining our preference ; we therefore confined ourselves to the consideration of the beauty and grandeur of the general design, to its practicability, to the skill shown in the various arrangements of the building, and the accommodation afforded, to the attention paid to the instructions delivered, as well as to the equal distribution of light and air through every part of the structure.

We now proceed to certify to Your Majesty, that, after long, minute, and repeated examinations and comparisons of the several designs submitted to us by the Office of Woods and Forests, although a difference of opinion may exist between us respecting the ground plans, separately considered, we are all unanimous in our opinion, that the one delivered to us marked 64. [Mr. Barry's design], with the emblem of a portcullis, bears throughout such evident marks of genius and superiority of talent as fully to entitle it to the preference we have given it in our classification ; and we have no hesitation in giving it as our opinion, that the elevations are of an order so superior, and display so much taste and knowledge of Gothic architecture, as to leave no doubt whatever in our minds of the author's ability to carry into effect Your Majesty's commands, should you be pleased to honour him with your confidence.

The next design we beg to offer for Your Majesty's consideration is that marked No. 14. [Mr. Buckler's design], and distinguished by the artist with the letter R., the elevations of which are deserving of much commendation, although, from the number of projections and recesses, which give a broken character to all the river front, it is much more difficult to judge what its effect will be when finished, than of any of the drawings in Plan 64., on which

we have just given our opinion: these objections, joined to others more important, which relate to the ground plan, have induced us to hesitate in the preference we should give to this or the design immediately following it in our classification.

In thus passing our judgment on the merits of No. 14., we have in some measure anticipated our opinion of those of its rival, No. 13. [Mr. Hamilton's design], bearing the motto of "King, Lords, and Commons;" but we must not omit to observe, in justification of the order in which we have placed them, that the architect of No. 13. had not to contend with the difficulty that, to a certain extent, presents itself in the preservation of the cloisters and crypt, and the restoration of St. Stephen's chapel.

We think it right, also, to remark to Your Majesty, as it may be an objection to the plan, that, being aware of the difference of opinion that exists as to the date which affixes the limits to the style termed Elizabethan, even amongst the profession, we determined to give it the greatest latitude of which it can possibly admit; and, considering No. 13. as possessing sufficient of the characteristics of the style, we have not hesitated, on account of this difference of opinion, to select it for a premium.

The last design to which we would pray Your Majesty's attention is No. 42. [Mr. Railton's design], bearing the device of the winged orb, which, if, as a composition, it ranks not in our opinion equally high with those we have already classified, is inferior to none in attention to the instructions and specifications delivered to the competitors, and to the general arrangement and accommodation required. Although Your Majesty has empowered us to select and classify plans to the number of five, we have found the merits of several so nearly balanced, that, unable to give a preference, we feel ourselves called upon, in justice to the parties, to abstain from any further recommendations. We cannot close our report without observing to Your Majesty, that we have not suffered our feelings to be biassed in the selection we have made by giving preference to a plan on account of its preserving those venerable and beautiful remains of antiquity, the cloisters and the crypt of St. Stephen's Chapel; we feel, nevertheless, assured that their existence need not interfere with the various arrangements requisite for such a building; and, if we had ever entertained a doubt on the subject, the plans which have been submitted would have completely removed it.

We have now, to the best of our ability, performed the duty imposed upon us by Your Majesty; we have pointed out the plan which, in our judgment, is most entitled to Your Majesty's gracious approbation: it is obvious that, previous to its being executed, it requires to be revised and corrected; but we feel confident that, had we thought it expedient to have communicated with the architect, as we were empowered to do by the commission, and pointed out such parts of the arrangement as appeared to us objectionable, he would have felt no difficulty whatever in removing them, and in rendering the plan not only free from any solid objection, but one the execution of which will throw lustre on the era in which it is built. We beg leave respectfully to add, that it is impossible to examine the minute drawings for this design, and not feel confidence in the author's skill in Gothic architecture: still, as the beauty of this style depends upon the attention to detail, for which the architect has no rule to guide him, but must trust to his practical knowledge and good taste, we humbly, yet strongly, recommend to Your Majesty that his drawings shall be submitted, from time to time, to competent judges of their effect, lest, from over confidence, negligence, or inattention in the execution of the work, we fail to obtain that result to which our just expectations have been raised.

We are, however, far from thinking it advisable, should the plan, when revised and perfected, be finally approved of by Your Majesty, that it shall be subject to any alteration that may have the effect of changing its character, or of impairing its unity of design.

We are aware that we are not called upon, in selecting and classifying the

plans for Your Majesty's approbation, to make the cost of any design an object of our consideration; and we fully agree in the prudence of having abstained from requiring the competitors to furnish estimates, which would have been productive of no public advantage, whilst the trouble and expense attending them would have been a considerable bar to competition.

It is not to be supposed, however, but that this subject would occasionally intrude itself on our thoughts in the course of our examination; and we humbly submit our opinion, that, in the event of any design meeting Your Majesty's approbation, a specification should be demanded of the architect of the style in which he intends to finish the interior, and the particular parts requiring, in his opinion, extra decoration, previous to his being called upon for any estimate: this remark suggests itself to us from the profuse and unnecessary ornament introduced by many of the competitors, merely, perhaps, to beautify their designs, but which would, if executed, be a wasteful expenditure of public money. We are conscious that, in the plan we have selected for Your Majesty's approbation, the enriched appearance of the several elevations will naturally excite suspicion that it cannot be carried into effect but at an enormous expense. In the absence of the detail of any portion of the work, we can form no perfect idea of the architect's intentions; but, even with the minute drawings before us, we have sufficient evidence to lead us to the belief that, from the unbroken character and general uniformity of the different fronts, and external decoration being wholly unnecessary in any of the courts, no design worthy of the country, of equal magnitude, can offer greater facilities for economy in the execution.

In the humble hope that Your Majesty will deign to approve our earnest endeavours to fulfil your commands to the best of our ability, we submit this our report to Your Majesty's gracious consideration.

CHAS. HANBURY TRACY.	(L. S.)
EDWD. CUST.	(L. S.)
THOS. LIDDELL.	(L. S.)
GEORGE VIVIAN.	(L. S.)

Approved of by His Majesty, and presented to both Houses of Parliament by His Majesty's command.

February 29. 1836.

DUNCANNON.

2. *Report from the Select Committee on the Rebuilding of the Houses of Parliament.*

By the Lords Committees [who were] appointed a select committee to consider of the report from the commissioners appointed by His Majesty to examine and report upon the plans which might be offered by the competitors for rebuilding the Houses of Parliament; and to report thereupon to the House.

Ordered to report, That the committee have met, and considered the report so referred to them; and have inspected the four plans mentioned in the said report, and marked respectively No. 64. 14. 13. and 42.; and have come to the following resolutions; viz.:—

Resolved,—1. That the committee, while they acknowledge great merit in all the plans laid before them, concur in the opinion of the commissioners, as expressed by them in their report to His Majesty, in giving a preference to the plan marked No. 64.

Resolved,—2. That it is the opinion of this committee, that the plan No. 64. ought to be so far adopted as to be made the basis of immediate further enquiries in respect to the cost of the plan, and to the best mode of carrying it into execution, and to any variations consistent with its general character and object, which may be found expedient.

Resolved,—3. That it is the opinion of this committee, that an humble address should be presented to His Majesty, to request that His Majesty will be graciously pleased to order that the further enquiries mentioned

in the preceding resolution be made forthwith, under the superintendence of the Commissioners of His Majesty's Woods and Forests, assisted by such authorities as they shall think fit to consult for the occasion.

That the committee having examined Mr. Barry, the architect who prepared the plan No. 64., have annexed that gentleman's examination, as it contains a statement of the principles on which that plan has been founded.

APPENDIX. Minutes of Evidence taken before the Select Committee of the House of Lords on the Rebuilding of the Houses of Parliament.

Die Martis, 8^o Martii 1836. The Lord President in the chair. *Charles Barry, Esq.,* is called in, and examined as follows:—The committee understand that you have prepared a statement of the principles by which you have been governed in preparing the plans now under the consideration of the committee? I have.—Have you that statement with you? I have.—Will you deliver it in? The witness delivers in the statement, which is read, and is as follows:—

Principles by which Mr. Barry has been governed in making his Design for the new Houses of Parliament.

Style. That of the styles proposed, Gothic or Elizabethan, the former of the Tudor period is preferable, as being homogeneous, well defined, and in harmony with the existing ancient buildings proposed to be preserved; whereas the latter is only an incongruous mixture of two styles in their decline, thus being utterly unworthy of the character of a great national edifice as a work of art, besides being at variance with the character of the existing buildings.

Ancient Buildings. That the hall, the crypt of St. Stephen's Chapel, and the cloister and chapels attached to the late Speaker's residence be preserved, and converted to useful purposes, and that St. Stephen's Chapel be rebuilt.

Position of proposed Building. That the building be set forward to the east into the river, in order to obtain an enlargement of the two Palace Yards, and thereby make them spacious quadrangles; and that the line of iron frontage be made, as nearly as possible, at right angles with Westminster Bridge; which, it will be seen by a reference to the official plan of the site, is but effected by a line drawn directly from the extremities of the frontage.

Entrances. That the entrance to the Commons, and the principal public entrance to both Houses, be in New Palace Yard; and that the King's and Peers' entrances to the House of Lords be in Old Palace Yard, in order that a material portion of the great influx of people attending the Houses may be arrested at the nearest point, namely, New Palace Yard, and that the entrance into Old Palace Yard may be freed from unnecessary obstruction.

Public Access. That, for the greater convenience of approach for the public generally, entrances be made at the south end of Westminster Hall, from Old Palace Yard, and at the old entrance of the House of Commons, opposite Henry VII.'s chapel.

River Entrances and Terrace. That private entrances to the Houses be made from the river; and a private terrace provided for the recreation of members of both Houses.

External Approach. That, in order to widen as much as possible the entrance into Old Palace Yard, the footpath, which is at present in front of the Italian building containing the Law Courts, be placed in a cloister within such building; which will not only allow the whole width between its south-western angle and the Abbey to be given up to a carriage road, but also provide a covered walk from Old Palace Yard to New Palace Yard, which, it is presumed, will be found of great convenience for alighting from, and entering into, carriages, and advantageous as a sheltered walk for persons having to wait in the neighbourhood of the Houses.

Enclosing East End of New Palace Yard. That the east end of New Palace Yard be closed by the river front, in order to shut out from West-

minster Bridge an unfavourable view of Westminster Hall, the Abbey, &c., produced by viewing them so much above their ground level; also, for preventing cold draughts of air from the river, which would render the quadrangle an unfit place for horses to be kept in waiting; also for shutting out an unsightly view of the bridge, as seen from Parliament Square, and the quadrangle itself; and, lastly, in order to avoid the necessity of occupying the property on the east side of Abingdon Street, the fee simple of which, alone, would not be of less cost than from 70,000*l.* to 80,000*l.*

Elevation and Character of River Front. That the river front be lofty, and as little broken as may be desirable, to avoid monotony; that the lower, or ground, story and terrace be as simple and solid as possible, in order to accord with the plainness of the bridge, and form a bold base to the building; and that the superstructure only be of a decorative character, so that the building may present a lofty, imposing, and ornate appearance when viewed from Westminster Bridge.

Architectural Composition. That all the entire mass of building forming the Houses and adjuncts be treated, in its architectural composition, as a single edifice, for the sake of unity, public character, and effect; and that towers be placed at the extreme ends of the proposed mass of building, in order that it may group with the Abbey, &c., and have an imposing effect when viewed with that building. That the details of the river front be large, and those of the other fronts small; as the former can only be viewed from a distance, whereas the latter will be subject to a much closer inspection.

Palace Yard Fronts. That the fronts towards New and Old Palace Yards, and Parliament Square, be kept as low as is compatible with the height of the river front, in order not to reduce the importance of Westminster Hall, which must necessarily be a very essential feature of the proposed mass of building, when viewed from the two Palace Yards.

Approaches generally. That the several internal approaches for the king, the lords, the commons, and the public, be distinct from each other, and easy of communication when desired.

King's Entrance. That the state entrance for the king be from the south-eastern angle of Old Palace Yard, through a tower, proposed to be of sufficient size to receive the state carriage, which is intended to set down at the foot of a flight of steps of considerable width, leading to a landing hall and gallery, communicating with the king's robing-room at the back of the throne end of the House of Lords. The upper part of the tower to be appropriated to records.

Peers' Entrance. That the private entrance for peers be direct from Old Palace Yard, by means of a flight of steps communicating with a large private lobby, affording access to the House, either at the throne or bar ends; and that a distinct approach be provided for the bishops, from a quadrangle east of the House, to their dressing-rooms, and thence into the House, at the throne end, on the opposite side to the entrance for the lay peers. That a water entrance be also provided, to communicate directly with the lobbies and corridors adjoining the House.

Commons' Entrance. That the private entrance for the members of the House of Commons be direct from New Palace Yard, by a flight of steps communicating with a private lobby at the bar end of the House; and that a water entrance be also provided for their accommodation, communicating with the private lobby alluded to, and the corridors adjoining the House.

Public Entrance. That Westminster Hall be the lobby, in common, between the Courts of Law and the Houses of Parliament, and also the grand public approach to the latter; and that for the last-mentioned purpose, as well as to carry on a dignified character of design in such approach, on a scale suitable to the character of the Hall itself, a handsome porch, with a flight of steps, be added at the south end of the Hall, with an opening into it of the rise of the present window when cut down to the level of the porch floor. That from such porch the approach be continued through St. Ste-

phen's Chapel (proposed to be rebuilt, and called St. Stephen's Hall), into a central lobby of great size, lighted by an octagonal lantern midway between the two Houses, and in immediate connexion with the public lobbies attached to each; that from such central lobby the public approach be direct, by means of a flight of steps of considerable width, to the committee-rooms in the river front; and that other committee-rooms be provided on the principal floor, with public access to them from St. Stephen's Hall, by which the private accommodation for members of the two Houses may not be interfered with. The porch proposed at the south end of Westminster Hall will present a feature of great interest in the view of the interior, and cause that splendid room to appear only as a part of a great whole, instead of being, as hitherto, an apparently isolated room, without being any other than as a lobby for counsel and persons in attendance on the Courts of Law.

Light and Ventilation of Houses and Committee-Rooms, and Level of principal Floor. That, in consequence of the great height of the Hall, and the level of high-water mark, neither the Houses, nor any of the committee-rooms, be upon the level of the ground story; but that, for the sake of height, good light, freedom from damp, and ventilation, they be placed on the principal floor, which is proposed to be made to accord with the level of the old floor of St. Stephen's Chapel.

Appropriation of Ground Story. That the ground story be wholly appropriated to record-rooms, public and private approaches, kitchen offices for the several residences which form part of the edifice, kitchen courts, and quadrangles of approach, cellarage under the Houses for warming and ventilating, &c.; and for many other useful purposes, such as store-rooms, clerk of works offices, workshops, &c. Perhaps it might be desirable to have, also, in this story, a public coffee-house, for the use of the bar and persons attending the Courts of Law and Houses of Parliament.

Position of Houses. That the situation of the Houses be in the centre of the mass of the proposed building, for the sake of convenience, quietude, and freedom from all disturbances from the exterior; also for affording the means of making them of the forms and size best suited to the wants of each House, without interfering with the unity of character maintained throughout the exterior; that all the lobbies and corridors adjoining them be only one story high, to admit of their being well lighted and ventilated.

Warming and Ventilating. That the warming of the Houses, committee-rooms, libraries, public and private lobbies, and corridors, be by means of warm water in pipes; that the ventilation of them be effected by a very minutely subdivided admission of tempered air from the floor; and that in the Houses, especially, the current upwards of heated and vitiated air be promoted by means of rarefaction created in a chamber above the ceiling, the air passing into such chamber through the perforated sides of a raised panel in the centre of the ceiling.

Acoustic Principle of the Houses. That, for the purpose of rendering the Houses effective rooms for hearing, in addition to the forms proposed, a continued sounding-board be affixed, so as to surround each House above the seat against the wall; that the walls be entirely lined with oak affixed to battening; and that the ceiling be, also, entirely lined with oak.

HOUSE OF LORDS.

Form and Arrangement. That the form of the House of Lords be an oblong, placed longitudinally to the approach; and that the internal arrangements be, in all respects, in accordance with those of the old House: that seats for distinguished visitors be above the cove forming the sounding-board over the seat against the walls; that two small, lateral, receding galleries, be provided at the throne end; and that the gallery for strangers and reporters be at the bar end: that the lobbies and corridors entirely surround the House.

HOUSE OF COMMONS.

Form and Arrangement. That the form of the House of Commons be an oblong, nearly approaching to a square, placed transversely to the approach, and arranged so that the distance from the bar to the chair shall not exceed that in the old House. That the seats for members shall be on the ground floor, and in receding galleries, and all within the least possible distance from the Speaker's chair. That the seats for peers, Speaker's orders, and reporters, be at the chair end of the House; and those for strangers in a gallery at the bar end. That the lobbies and corridors entirely surround the House.

Libraries and Refreshment Rooms. That the libraries and refreshment rooms be upon the level of the floor of the Houses, immediately adjoining and communicating with the private lobbies, so as to be entirely free from intrusion from strangers at all times.

Committee Rooms. That a large proportion of the committee-rooms be upon the principal floor, and the rest in the floor above; that none of them be less than 20 ft. of clear height; and that as many of them as possible be placed towards the river front, for the sake of cheerfulness, good light, and ventilation.

Lords' State Officers. That the rooms for the state officers of the House of Lords be in the front towards Old Palace Yard.

Public Offices. That the public offices be immediately adjoining, and contiguous to, each House, with distinct access for members and the public thereto.

Official Residences. That the whole of the official residences be incorporated in the design for the proposed building, without disturbing its unity of character; and that the principal rooms of each residence be upon the principal floors of the entire edifice, with immediate communication therewith.

The witness is directed to withdraw. Adjourned.

3. Second Report from the Select Committee on the Rebuilding of the Houses of Parliament.

By the Lords Committees [who were] appointed a select committee to consider of the report from the commissioners appointed by His Majesty to examine and report upon the plans which might be offered by the competitors for rebuilding the Houses of Parliament, and to report thereupon to the House; and to whom leave was also given to report from time to time to the House.

Ordered to report, That the committee have again met, and further examined Mr. Barry as to the plan marked No. 64., and the variations of which it would admit, in pursuance of the suggestions contained in their former report.

It appears to the committee that, after adopting some alterations and omissions not inconsistent with its character and object, the expense of the whole building may be expected to amount to 724,984*l.*, including 14 per cent to cover contingent charges, and any probable change in the value of materials; to which would be added about 60,000*l.* for the purchase of ground in Abingdon Street, rendered necessary for the elongation of the building as now proposed, and 30,000*l.* for fittings and fixtures.

The committee feel themselves, after a full consideration, justified in recommending this plan for adoption; trusting that, considering the magnitude of the expense to be incurred, such arrangements will be made by government as will secure the greatest vigilance and economy in carrying the object into effect; both with reference to the just remuneration of the persons to be employed, and the details of the work itself.

The further examination of Mr. Barry, referred to in this Report, is annexed by way of appendix.

APPENDIX. Minutes of Evidence taken before the Select Committee of the House of Lords on the Rebuilding the Houses of Parliament.

Die Veneris, 22^o Aprilis 1836. The Lord President in the chair. *Charles Barry, Esq.,* is called in, and examined as follows:—

The committee wish to know what alterations have been made since the plans were sent in?

The principal alterations are,—a removal of the entire building from Westminster Bridge, to the extent of 150 ft., instead of being, as in the original design, 60 ft.; an extension of the river front, which has enabled me to enlarge the whole of the internal courts, for the purposes of increased light and ventilation; a removal of the two Houses to a greater distance from each other, and certain modifications in the arrangement of the offices, residences, &c. The plan, in all other respects, remains much the same, except in being more square, and upon a parallel with Westminster Hall, in consequence of the late alteration in the line of embankment towards the river. The composition and character of the design remain nearly the same.

Has there been any new distribution of the rooms?

No, not any that are material, except as regards four committee-rooms adjoining the Speaker's house, which might have been inconvenient, as intercepting the access of the Speaker to and from the House. These committee-rooms are now placed in the centre of the river front.

Would it make any great difference if the library, which you have now destined to be at such an immense distance from the House of Lords, and from which the Lord Chancellor, when he is sitting, is every instant wanting books, were removed closer?

The distance is not very great; it is connected by a corridor adjoining the gallery at the south end of the House, which corridor is about 80 ft. in length, and in a direct line; the House of Lords is nearer the library than it was in the original design.

The object of the question was, whether you could not make a sufficient arrangement for the rooms for the bishops, and place the Lords' library nearer the House?

It would be injurious to the plan to do so. The approach to the library is commodious by means of the corridor alluded to.

Direct, without any turning?

Yes; on coming out of the corridor of the House, the library is within a distance of 80 ft.

Will the House of Lords have so beautifully a shaped library as they have now?

I think the proposed library will be in better proportion.

You have altered the smaller tower: the last was infinitely more beautiful, and more in character, was it not?

It is still in the same character in its detail as the rest of the building.

Was your object in altering the smaller tower for the sake of reducing the expense, or from an idea of your own, that it would improve the building?

Not for the purpose of economy, but to make it accord with the modified plan, as well as to improve the external character of the design. In the original design, the tower contained the Speaker's dining-room, which, in the amended plan, has been removed, so that so large a tower was unnecessary.

Then, in your judgment, it improves the elevation of the building?

Yes; it is a great improvement.

You have stated that, by the taking down of the buildings in Abingdon Street, you obtain ground to the extent of about 100 ft. What increased extension of building do you contemplate?

The ground thus obtained has a frontage to the river of about 200 ft.; about one half of which, or 100 ft., I appropriate to an elongation of the river

front. It was optional with architects to take or exclude from the site the property between Abingdon Street and the river.

Then the length of the building is considerably increased?

Yes, the length of the entire building is increased about 50 ft., and removed nearly 90 ft. farther from the bridge.

Is it increased in size?

In length only.

Is the tower in a different situation in the new plan?

No.

Can you, unless you take down all the houses in Abingdon Street which you have the power to take down, open any view to the tower, and the part between the tower and the river?

I propose for this purpose to take down the whole of the buildings on the optional ground.

It was understood this ground would be disposable?

Yes; in fact, there were very few of the competing architects who did not take the advantage of it: they considered it to be a part of the given site.

Then the front of the new Houses of Parliament, according to the improved design, will be 50 ft. longer than according to the original plan?

Yes.

Have the alterations, as contained in these plans, the distinct approbation of the commissioners?

Entirely so.

Is there any alteration in the office appropriated to the Lord Great Chamberlain?

None as to accommodation, but as to position only.

Does the sum total cover the whole expense?

Yes, with the exception of the cost of the site, which I considered to be already provided.

By the original design the terrace towards the river was to be 26 ft. wide?

Yes.

And by the altered plan that is extended to 30 ft.?

Yes.

Is that the utmost limit to which you could carry it?

Yes, I think so, when considered with reference to the character of the river front.

It is as wide as you could desire it if you had the power to increase it?

Yes.

But you consider the additional 4 ft. an improvement?

Yes, I think it is; it was made in accordance with a wish expressed by one or two members of the Committee.

Is that increased width obtained by taking more from the river than was taken before?

No; but by setting the building back.

Where was the 4 ft. taken from?

It is obtained by setting back the river front, which has not occasioned any loss of accommodation, as the entire building is increased in length.

So that the loss in breadth is made up in the addition to the length?

Yes.

How long do you think that it would take to complete the building?

I imagine about six years for the entire completion: it will be possible, however, to complete the Houses and committee-rooms long before that period, perhaps in about two years.

But, in the meantime, the temporary buildings need not come down?

No, the present Houses need not be taken down until the new Houses are completed.

Does the alteration leave the distance between

the end of the House of Commons and Henry the Seventh's Chapel the same, or more than it is now?

The question, I understand, alludes to the width of the entrance to Old Palace Yard, where there is a very considerable alteration, which occasions an increase of width from 60 ft. to 100 ft.

How has that been done?

By shortening the Law Courts' front, as will be perceived in this plan. The view of the tower will be very much improved by the increase of the opening alluded to.

Where is the entrance for members of the new House of Commons?

In New Palace Yard. (*The witness pointed it out on the plan.*)

Would it not be an improvement to take away the proposed buildings at the south end of Westminster Hall, and make an entrance through the cloister?

It would be attended with an entire demolition of the cloister, and not have so good an effect as the approach which is proposed.

As to the expense, what is the increase in respect to the difference of the plan as now corrected, and the plan as originally proposed; is it in the additional purchase of the land in and near Abingdon Street which was not included in the original plan?

Yes.

What would be the additional expense of that purchase?

About 60,000*l.*

What would be the additional expense resulting from the increased length of the whole building?

It is rather difficult to answer that question, because upon the original plan no detailed estimate was made. The sum first mentioned was only a speculative estimate; but, as compared with that, it would be about 60,000*l.*

Can you tell what will be the diminution of expense resulting from the retrenchment of the decorations?

About 50,000*l.*, occasioned by the omission of niches, statues, paneling of parapets, &c.

Therefore the addition to the total expense made by all the alterations is about 60,000*l.* or 70,000*l.*?

Yes, including the fee simple of the enlarged site.

The purchase of the ground is in addition; and then you deduct the expense of the decorations, and the balance is about 60,000*l.* or 70,000*l.*?

Yes.

What is the amount of your estimate, including every thing?

724,984*l.*

Does that include the purchase of the ground?

It is exclusive of the site.

Then this is exclusive of the purchase of the ground in Abingdon Street and the embankments?

Yes; it is a maximum estimate as applying to the building only.

Does that estimate contain any amount for contingent expenses?

Yes.

At what rate?

At the rate of 14*l.* per cent.

Does that include the supervision by the architect?

Yes.

Does it include the river embankments?

It is exclusive of the river embankments, for which a grant has been already voted by the House.

Does that estimate include the interior fittings at all?

It does.

By interior fittings what do you exactly understand?

I mean closets, presses, fixtures of the domestic offices in the several residences, and things of that description.

Nothing that approaches to furniture and internal decorations?

No, not furniture.

Fixtures?

Yes.

Do you include grates?

No.

But you do chimney-pieces?

Yes.

What is your estimate of the embankments?

40,000*l.*

What provision is made for ventilation for these Houses; is it included in this plan?

The only provision for ventilation consists of the necessary flues in the several walls; but the apparatus has not been estimated.

Has your attention been turned to Mr. Nott's American stoves?

Yes.

There are some in the new Pantheon?

Yes, there are.

Do you think they are safe for buildings?

No; I do not think they are so safe as many other inventions for warming.

Do you not think they are less dangerous than others?

No; I should say with respect to them that there was an apprehension of danger arising from the iron becoming red-hot.

What calculation of prices have you adopted in forming this estimate?

The present market prices.

Do you consider those prices to be generally high?

Yes; I consider them to be high.

The price of iron has risen very recently to some extent, has it not?

Yes; the price of iron is now eight pounds or guineas in the pig.

Lead is also rising, is it not?

Yes.

Is the base intended to be built with granite?

No, certainly not.

That is done in all churches, is it not?

No, not in every one.

Is it intended to build these walls upon concrete?

Yes.

So as to build upon the bed of gravel?

Yes.

Has the estimate been formed upon the highest-priced stone that could be got?

Yes, upon the highest-priced stone that is likely to be used.

In order to understand the alterations, would it not be desirable to have a transparent plan to lay over the original?

I have not prepared any such plan, but I could explain the alterations as well without it.

Do the interior alterations involve any material alterations in the exterior?

No; not any of consequence, except the extension of the river and west fronts about 50 ft.

In what manner would that affect the river front?

In the manner shown by this elevation. (*The witness pointed out the same.*)

What is the difference in cost from the alterations made?

I should say about 60,000*l.*; that is, by removing the niches, paneling of parapets, &c.

Do you think the present plan, including the recent interior alterations, can be effected for 60,000*l.* less than the original?

No, because the plan has been extended. The extension of the plan makes up for the saving in the decorations.

The two additions together, balanced against the reduction, leave an increase of 60,000*l.* or 70,000*l.*?

Yes, if the fee simple of the ground between Abingdon Street and the river is included.

In consequence of the contraction of the Law Courts' front, is it not necessary to make up for that; was it no part of the plan of the Houses?

It was wholly unconnected with the plan of the Houses and their accommodation.

Will there be a greater space than in the original plan between the south front of the proposed

building and the remaining houses in Abingdon Street?

Yes, the increase in the space is 40 ft.: it would, according to the original plan, have been 30 ft., and it is now 70 ft.

Something was said about the buildings in Abingdon Street, and the expediency of getting rid of those buildings, to give a full view of the grand tower: if you had your choice, would not you prefer getting rid of the buildings in Old Palace Yard, in order to extend the perspective view of the tower, and also to extend the view with regard to Westminster Abbey?

Yes, I should say that the buildings on the south side of Old Palace Yard would be better removed.

You say you have taken your estimate upon the highest price of materials?

Yes, at the present time.

And upon such highest price you have added 14l. per cent?

Yes, to cover all contingent expenses.

Have you not reason to expect that the prices will rather remain stationary, or will fall, and that, therefore, there is no necessity for charging 14l. per cent as a possible increase upon such estimate?

I cannot give an opinion. The allowance of 14l. per cent is not entirely for any possible increase that may take place in the value of labour and materials, but also to cover all contingent expenses.

So far as such charge of 14l. per cent is intended to include the possible increase of prices, do you consider the state of the market at the present time to require such a per-centage?

Yes. I should say, with respect to iron and lead, there is a probability of an increase.

The witness is directed to withdraw. Ordered, That this committee be adjourned to Wednesday next, at half-past three o'clock.

Die Mercurii, 27^o Aprilis 1836. The Lord President in the chair. *Charles Barry, Esq.,* is called in, and further examined as follows:—

Since you gave your evidence on a former day, have you had occasion to alter your opinion in any respect as to the amount of the estimates which you have delivered in, and the answers you made with respect to them?

No; except as to the amount for fixtures, which, I find, is not, as I then stated, included in the gross amount.

Have you seen any occasion to alter your opinion as to the time which you thought it would take?

Not at all.

Do you suppose that it would be possible to have any committee-rooms ready by next year?

I think it would be quite impossible.

You are aware of the great inconvenience felt at the present moment from the want of committee-rooms?

Yes, I am quite aware of that.

You stated, on a former day, that the estimate was to include the internal fittings: will it include all the fittings?

The amount which I put down for fittings, I see, from a paper which I have, is not included in the estimate.

What additional amount do you conceive may be necessary for fittings and fixtures beyond what is contained in the sum of 724,984l.?

About 30,000l.

You consider that that will be the whole expense, with the exception of the furniture?

Yes, with the exception of the furniture.

You do not propose employing concrete in any thing but in the foundation?

No.

And in so employing it you feel confident that it is the best material that can be employed?

Yes, I do.

What materials do you propose employing for covering the roof?

Slate.

Of the best quality?

Certainly.

Have you had any further communication with Mr. Walker with respect to the embankment?

No.

How long do you suppose that it would take to complete that embankment?

That is a question that it would be rather difficult to answer, where so much depends upon contingencies. I should think the embankment could be completed this year.

But, in fact, you cannot commence your building till that embankment is complete?

The foundations of a portion of the buildings may be brought up to the level of the ground line at the same time that the embankment is in progress.

The witness is directed to withdraw. Committee adjourned *sine die*.

REVIEWS.

ART. I. *Perspective Rectified; or, the Principles and Application demonstrated: illustrated with Sixteen Plates.* By Arthur Parsey, Professor of Miniature-Painting and Perspective. 4to. London, Longman and Co.

THE author of this work has long been known among artists as a miniature painter of no inconsiderable ability. The work has no pretensions to literary merit, as the author has freely acknowledged in the introduction; but it must be observed, nevertheless, that the first twenty-four pages contain a number of rational and comprehensive remarks on the philosophy of perspective, if I may be allowed the term, calculated to be understood by the general reader.

It has always been a difficult matter for persons not thoroughly conversant with this art, to divest their minds fully of the idea, that the abstract form of objects has the same appearance as their true form, when viewed perspectively. Mr. Parsey, in explaining this point, remarks that, "to prepare the mind for definite rules, the pupil must know that appearances are the effect of an object on the mind through the medium of the eye; and that a picture is a representation of that effect on the artist's mind, from some fixed spot, and at a particular time. The object, the eye, and the mind are inseparably connected; for, if we take away the object, the eye has nothing to convey to the mind; and the same result follows the removal of the eye or mind. As the object, the eye, and the mind have a fixed relative position at the time of making the drawing, the eye being at a certain distance from the object, and above, level with, or below it, the distance in the plane of the eye is commonly expressed as the point of view; which, without consideration, does not embrace the connexion of eye, distance, and thing." (p. 16.)

It is almost unnecessary to point out to any reader of this Magazine the utility of the study of perspective to artists and draughtsmen, and the disadvantages under which those unacquainted with this art must labour. I will not, however, go so far as Mr. Parsey, in saying that drawing and perspective are strictly synonymous; because geometrical delineations, isometrical projection, and all orthographical representations, are decidedly drawing; and yet none of them have any connexion whatever with perspective; but it must be distinctly understood that a thorough comprehension of the latter art is a species of knowledge so essential to a cultivation of the pictorial art, that without it the student cannot advance much beyond the rude essays of uncultivated taste. It is the only means by which a just and true delineation of objects in nature can be produced: so that a knowledge of perspective is not merely an assistance or guide to the draughtman, but it is the legitimate foundation on which the artist must erect his pictorial structures.

Mr. Parsey, having the same view of the case, has dispelled the mysteries of the art of perspective, by plain and intelligible illustrations and descriptions; and his book is divested of many of those pedantic and torturing technicalities which former writers on perspective considered essential to the full illustration of their subject.

Mr. Parsey commences his work with a very appropriate introduction; and he then explains the elementary principles of perspective, and the terms used in the art. We have next a number of comprehensive illustrative diagrams, showing the application of those elementary principles to the delineation

of rectangular, multangular, oblique-angled, and curvilinear objects.

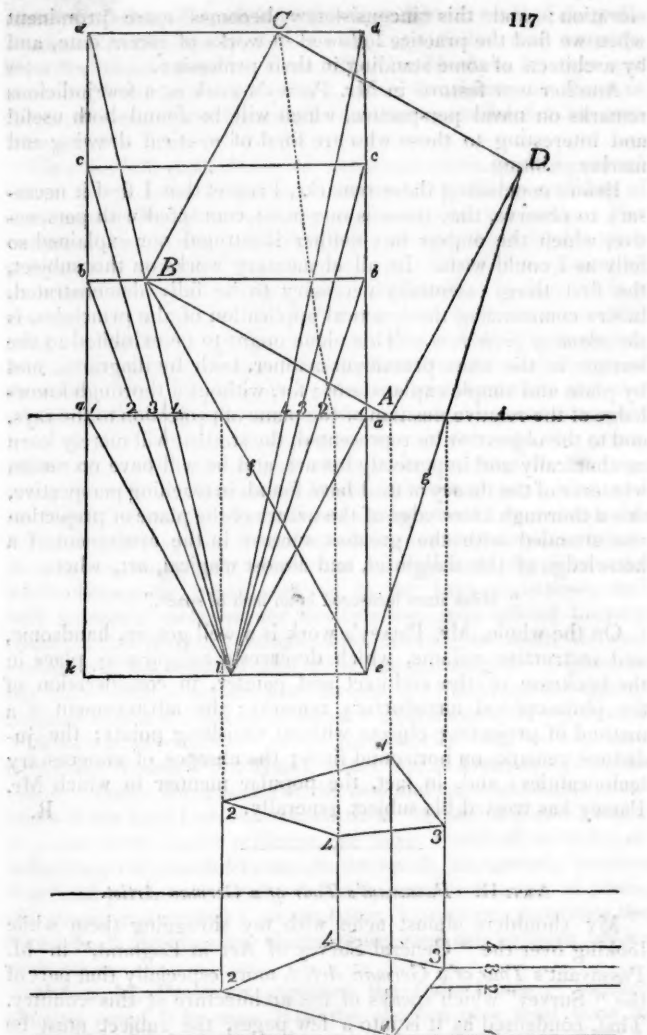
There is but little new matter in the work; but the manner in which the author has treated the subject has enabled him to condense a deal of matter in a small space; and yet it is given in a plain simple manner, so as to be easily understood.

There is one new feature in the work, however, which deserves notice, and which will render it interesting to the lovers of perspective: this is a method of drawing objects without the use of vanishing points. "The comprehension of vanishing points," says Mr. Parsey, "which govern all perspective diagonal lines, has always been an insurmountable difficulty. I have introduced a method of drawing objects without the use of them, which, I conceive, with a little practice and thought, will dispel any misconception, assign them their proper place, and henceforward produce a true perspective." (*Introd.*, p. viii.) The following enlarged diagram, copied from Mr. Parsey's book, will illustrate this matter:—

"In *fig. 117.*, *A B C* is the ground plan of a cube; *e* the station point; *f g* the visual rays; and *a i* the horizontal line, or plane of projection. The distance between *a a* is made equal to the height of the object to be projected. The lines *a a*, *b b*, *c c*, and *d d*, are drawn from the different angles of the plane, until they cut the parallelogram *d d e k*. From the points *a b c d* rays are drawn to the point *l*, which rays cut the plane of projection. Indefinite perpendicular lines are then drawn for the elevation; and from the base line, parallel lines are also drawn at the distances 1, 2, 3, and 4, found on the line *a i* of the plan; which parallel lines, cutting the perpendicular lines, determine the lower angles of the cube. The distance 1 1 determines the perpendicular height 1 1 in the elevation; the distance 2 2 on the plan gives the perpendicular height 2 2 in the elevation; and, in like manner, the other two perpendicular heights, 3 3 and 4 4, are found."

This method may do exceedingly well for simple rectangular objects; but it would be by far too tedious a process to follow in projection of complicated figures. Many different instruments have been invented by ingenious individuals, in order to supersede the necessity of vanishing points in making perspective drawings, one of which is figured and described in Vol. II. p. 49. of this Magazine; but no instrument has yet been invented for this purpose equal to the centrelinead of the celebrated Mr. Peter Nicholson. One of the best proofs of the utility of this instrument is, the fact of its being in constant use among draughtsmen who are in the practice of making large architectural drawings in perspective.

But to return to the work before me: Mr. Parsey has fully



defined the proper distinction between perspective and geometrical drawings. We frequently see well-executed geometrical elevations surrounded by objects in perspective, and, indeed, by landscape generally. Nothing can be more absurd than to introduce bold foregrounds and aerial tints a round a geometrical

elevation; and this inconsistency becomes more prominent when we find the practice followed in works of recent date, and by architects of some standing in their profession.

Another new feature in Mr. Parsey's work is, a few judicious remarks on naval perspective, which will be found both useful and interesting to those who are fond of nautical drawing and marine painting.

Before concluding these remarks, I regret that I find it necessary to observe, that there is one point connected with perspective, which the author has neither illustrated nor explained so fully as I could wish. In all elementary works on this subject, the first thing essentially necessary to be fully demonstrated, before commencing the practical application of the principles, is the *plane of projection*. This plane ought to be exhibited to the learner in the most prominent manner, both by diagrams, and by plain and simple explanations; for, without a thorough knowledge of the relative position of the plane of projection to the rays, and to the objects to be represented, the student will merely learn mechanically and imperfectly his art, and he will have no notion whatever of the theory of it. I have found, in teaching perspective, that a thorough knowledge of the nature of the plane of projection was attended with the greatest success in the attainment of a knowledge of this delightful, and almost magical, art, where

"Miles seem measured in an inch of space."

On the whole, Mr. Parsey's work is a well got up, handsome, and instructive volume, which deserves a conspicuous place in the bookcase of the architect and painter, in consideration of the philosophical introductory remarks; the advancement of a method of projecting objects without vanishing points; the judicious remarks on horizontal lines; the absence of unnecessary technicalities; and, in fact, the popular manner in which Mr. Parsey has treated his subject generally.

R.

ART. II. *Passavant's Tour of a German Artist.*

My shoulders almost ache with my shrugging them while looking over the "General Survey of Art in England," in M. Passavant's *Tour of a German Artist*, more especially that part of the "Survey" which speaks of the architecture of this country. That, condensed as it is into a few pages, the subject must be treated "slightly" and "sketchily," may well be imagined; yet its brevity is no excuse for its being also vapid and feeble; affording scarcely a glimmering of opinion, while what little opinion there is, conveys no high idea of the writer's ability as an architectural critic.

Even in his preface, M. Passavant is guilty of an extraor-

dinary omission; for, while he there enumerates most of the publications by German travellers who have visited this country, from Volkmann down to Prince Pückler Muskau, he says not one syllable in regard to Forster, whose *Geschichte der Kunst in England* would have furnished him with a model for his own "Survey."

How far he is accurate in the main part of his work, I pretend not to judge; but, if not more correct than when speaking of architecture, he certainly is not to be trusted implicitly. For instance, he says that the plans, &c., of Holkham House were published by Brettingham, in 1711; that is, about a quarter of a century before the building was commenced. It may be that this date is a mere error of the press; and, for what I can tell, it may be correctly printed in the German "1761." However, leaving M. Passavant and his translator to settle that between them, it is a mischievous error as concerns the reader, and one of that kind which ought to be very particularly guarded against by a printer. It cannot, however, be an error of the press, when the writer tells us, that the volume in question contains "a particular description of Holkham, with ground plan and sketches." Now, it happens most unfortunately, as regards M. Passavant, that, so far from there being a particular description, there is not *one syllable whatever of description of any kind*; the whole letterpress being confined to the title, dedication, and half a page of preface; for Brettingham, who affixed his own name to the designs, without once alluding to Kent, the real architect of the mansion was either too ignorant to be able to elucidate such a subject with his pen, or blockhead enough to imagine that it did not at all require elucidation. If we want a "particular description," or the materials for one, we may turn to Arthur Young's *Six Weeks' Tour*, and to Dawson's *Holkham Guide*; which latter is one of the best and most satisfactory manuals of the kind I am acquainted with. Again, as if one blunder at a time were hardly sufficient, we have a second mistake, or something very much like one, in the words just quoted; because "ground plan and sketches" hardly implies a series of plans, elevations, and sections; which latter, I presume, constitute the "sketches," although few things of the kind can be more unlike each other.

When M. Passavant mentions the India House ("another existing proof," he says, "of the absence of a solid taste in architecture"), he is pleased to attribute to it a portico of "*Corinthian pillars*!" This, to be sure, may be only a blunder, akin to that the other day in a report of a paper read at the Architectural Society; where the "*Corinthian*" portico of Covent Garden Theatre was mentioned as an instance of architectural impropriety in such a building! Still, it is a very

awkward one; and, as the writer assigns no ground for his censure of the India House, it is hardly worth while for us to puzzle ourselves in conjecturing what his mysterious language meant.

In the Post-Office, however, he seems to discover that "solid" taste, the absence of which offended him so much in the other building; for "particularly grand," he observes, "is the great façade with its triple colonnade; the inner large court, also, occupying the whole centre of the building, is highly effective, and quite in character with the front." Travellers have, certainly, the privilege of seeing strange sights; and, accordingly, M. Passavant may be allowed to behold what he calls a "triple colonnade," and "the inner large court"; although few, without having seen the building, would be able to understand the kind of triplicity he means; at least, it passes my comprehension to guess how three distinct rows of columns, viz. those of the portico, and the two extreme pavilions, can be styled a triple colonnade. Equally does he deal in enigma when he calls, or, at least, is made by his translator to call, the hall an inner "court;" for, unless when speaking of courts of justice, we never apply that term to any other than an uncovered space.

However, letting this pass as a mere oversight, I think he is equally incorrect when he calls it "highly effective, and quite in character with the front." As far as the columns alone are concerned, it may be so; but all the rest is poor, cold, insipid, without even an attempt at consistency of style. The arched windows and doors are positive blemishes; the hanging gallery in the attic above them anything but pleasing in effect; and the mean naked windows on the sides fit only for a kitchen or a stable.

M. Passavant does not expend all his admiration on the Post-Office; for in another work of Sir R. Smirke's he discovers still "greater consistency of style." Yet here, again, I differ *toto cælo* from him, being of opinion that he could hardly have pitched upon a more *mal-à-propos* example of such consistency than the Union Club-House, a structure of the most patchwork design.

However, it is not often that M. Passavant commits himself in such way; and for this reason: because it is very seldom indeed that he adds even a syllable of remark respecting the buildings he mentions; of which number, strange to say, the New Palace is not one. Are we, then, to understand that he considers it unworthy of being even named among the architectural productions of this country and age? Why, this is treating it worse than even Von Raumer does. There are other omissions, however, hardly less striking: for instance, he says no more of the London University than he does of the Palace,

although he enumerates some other buildings by Wilkins. In the same predicament is the beautiful chapel of Greenwich Hospital, perhaps the most perfect and finished thing of its kind in the kingdom; and yet very little spoken of either by Englishmen or foreigners. According to M. Passavant, Apsley House was modernised and improved, not by Benjamin Wyatt, but Sir Jeffrey Wyatville; and he also commends it as having "a fine portico, with Corinthian pilasters." Now, the portico is certainly not "fine," in any sense of that epithet; it is merely neat in itself, and a tolerably handsome feature. But what does he mean by speaking of the pilasters as if they constituted the portico. The expression is so worded, that it might be thought he mistook the pillars for pilasters: by a blunder, the reverse of that committed by Elmes, who speaks of the "tetrastyle portico" of Crockford's club-house, although there happens to be no portico at all, but merely four pilasters.

I have no doubt that M. Passavant's work contains much new and valuable information relative to the various collections of paintings and drawings he visited in this country, particularly as regards the early Italian masters; but he is exceedingly superficial and careless when he ventures to speak of architecture. Had he done so only incidentally, his inaccuracies and jejune-ness might have been overlooked: the case is different when he formally devotes an entire section of his "Survey" to the subject; and, as his reviewers will probably pass over those pages in entire silence, it is but proper that the world should know how far he is to be trusted in regard to such matters. — CANDIDUS.

ART. III. *The History and Antiquities of the Round Church at Little Maplestead, Essex, formerly belonging to the Knights Hospitallers of St. John of Jerusalem (afterwards known as the Knights of Rhodes, and now of Malta); preceded by an Historical Sketch of the Crusades.* By William Wallen, F.S.A., Architect. 8vo, pp. 207. London, 1836.

THE author has bestowed uncommon care and attention on this work; and he has succeeded in making it very entertaining; while the beauty of most of its woodcuts renders it quite a gem. The initial letters to the chapters are curiously designed, and beautifully engraved; and among the vignettes, that respecting the charge of the Hospitallers at the battle of Acre we consider as a most artist-like production. In a purely architectural point of view, the work cannot be considered of much value; but, as a piece of topographical history, and as the history of the Crusades, it is both instructive and entertaining. This will be evinced by the titles of the chapters, which we give as follows —

Chap. I. An Historical Sketch of the Crusades. II. First Crusade, 1096; William Rufus. III. A. D. 1099; William Rufus. IV. A. D. 1189; Richard I. V. A. D. 1200; John. VI. A. D. 1267; Henry III. VII. Manor of Little Maplestead. VIII. Little Maplestead Church. There is an Appendix, which occupies from p. 161. to p. 207.

ART. V. *Catalogue of Works on Architecture, Building, and Furnishing, and on the Arts more immediately connected therewith, recently published.*

PLANS for the Improvement of the Port at Leith; with Observations on the Tidal Currents; and on all the important Matter contained in the Report of the House of Commons on this and other Subjects connected with it; also with additional Arguments on the Possibility of effecting the Physical Destruction of any Harbour between Granton and Newhaven inclusively. By John Milne, Teacher of Architecture and Engineering, 8. James's Square, Edinburgh. Second edit. Edinburgh, 1835. Price 1s.

A prominent feature in Mr. Milne's plans is, to form his docks upon and in a rock, visible at low water, by excavating the rock, and using the quarried material on the spot, for building the walls, piers, breakwaters, &c.

Tables of Continental, Lineal, and Square Measures, by W. S. B. Woolhouse, Head-Assistant on the Nautical Almanac Establishment. Pamph. 8vo, pp. 10. London, 1836.

These tables have been already noticed, when speaking of Moller's *Architecture*, as they were originally published as an appendix to that work, and are only now sold separately for the convenience of those who may not wish to purchase the entire volume.

MISCELLANEOUS INTELLIGENCE.

ART. I. Domestic Notices.

ENGLAND.

OPENING of Islington Cattle Market. — The new cattle market at Islington, which opened on April 17th, is stated to be the sole property of Mr. Perkins of Bletchingly. It stands upon an area of 15 acres, the whole of which is Mr. Perkins's freehold. It is capable of accommodating 7000 head of cattle, 500 calves, 40,000 sheep and lambs, and 1000 pigs. The pens and stalls are so arranged, that the dealers will have the opportunity of proceeding, without any inconvenience, close to the animals, and minutely examining them. In the centre of the market there is a range of buildings, containing eight dis-

tinet banking-houses, or money-takers' offices; and enclosing a spacious circular area for the purposes of an exchange for the meeting of salesmen, graziers, and others engaged in the business of the market. The cattle lairs are supplied with troughs filled with spring water; and which, at any season of the year, must prove a great relief to the cattle. The grazer will thus have the opportunity of fairly exhibiting the cattle for sale, instead of exposing them in the limited space in which they frequently appear at Smithfield. The market is approached on three sides, by wide and spacious roads, from which there are six handsome and convenient entrances, with iron gates, to be closed at night. At the principal entrance there is a splendid building, called the market-house, which is intended to furnish accommodation to the clerk of the market, and to be devoted to other purposes connected with the establishment. This great undertaking was commenced on the 17th of November, 1833, and completed at an expense of 100,000*l*. The whole was built and arranged under the superintendence of Mr. John Wigglesworth, who deserves the highest praise for the admirable manner in which it has been executed. (*Morning Chronicle*, April 17.)

The New Portman Market Theatre is to be proceeded with immediately; the expenses to be defrayed by the sale of 100*l*. shares. — *Tyro. Wilmington Square.*

Southwark. St. Saviour's Church. — Last month a deputation of gentlemen waited upon Lord Melbourne, for the purpose of soliciting a grant of money towards repairing the nave of St. Saviour's Church; but neither a decisive answer, nor much hope, was given. The sum required for repairing the nave is 12,000*l*. — *Id.*

Knightsbridge. — The infantry barracks at Knightsbridge are to be taken down at midsummer, and mansions of a superior kind erected in their place. — *Id.*

A New Suspension Foot-Bridge is in contemplation to be erected over the Thames, between the Waterloo and Westminster bridges, connecting Hungerford, in the Strand, with Pedlar's Acre, in Surrey. The cost is estimated, by Mr. Brunel, at 75,000*l*. — *Id.*

A plain Column, mounted upon a square pedestal, formed of granite, and supporting two lamps, has very recently been erected in the centre of the diagonal crossway from the north-east corner of Trafalgar Square, to a short distance beyond Northumberland House, on the Charing Cross side. — *Id.*

The New Post-Office. — The entrance to the new Post-Office from Cheap-side is being widened by the removal of six houses, which are now being taken down, on the Paternoster Row side of St. Martin's-le-Grand. — *Id.*

Bedfordshire. Amptill. — A new workhouse, situated at Amptill, has been recently covered in: the interior fittings are now being completed. The external arrangements, if any style in particular can be discerned, are in the Italian manner. It is being built in an economical manner, at the cost of 2200*l*., yet sufficiently large to contain a great number of persons. — *Tyro. Wilmington Square.*

Cumberland. Whitehaven. — The famous pier, built for the protection of the harbour by Sir John Rennie, has been entirely demolished by the recent severe storms. — *Id.*

Devonshire. Newton Abbot. — A new Independent chapel is forthwith to be erected here, from a design by E. W. Gribble, Esq., Torquay, who has displayed great ingenuity in meeting the several difficulties caused, principally, by the confined and oblique-angled site. There are some novelties in the design, which seem admirably adapted to the purpose in view. The front (which, alone, I can now notice) is simple and effective; and the necessity of having more than one tier of windows is yielded to without producing that awkward effect too frequently met with. The style is Italian, presenting a façade of lofty arched recesses, within which are the doors and windows. There are two entrances, one at the second recess from either end; and over these are two long windows, both so placed by necessity. The other three

recesses contain lunettes above, and triple windows within the same breadth below. The whole is crowned with a pediment; and, altogether, fully expressive of its purpose; reflecting great credit, not only on the architect, but the very respectable body for whose use it is intended. — *A. M. February 16. 1836.*

Hertfordshire. Bishop Stortford. — Plans, elevations, &c., for a new workhouse, to be erected at Bishop Stortford, have been advertised for; to be sent in by the 17th of March; the result I have not heard. — *Tyro. Wilmington Square.*

Hitchin. — A new workhouse is to be erected at Hitchin; the various works were put out to contract. — *Id.*

Waltham Cross. — The third cross erected by Edward III. to the memory of his queen, Eleanor, was Waltham Cross; which is more richly ornamented than either of the former. It has lately been partly restored, under the superintendence of W. B. Clarke, Esq.; but in a manner which certainly reflects very little credit on the workmen employed. The restored parts are either too large, or very clumsily fitted. Prior to its being restored, it had quite a picturesque appearance, and was much admired; but now, on the contrary, it is generally abused. The drawings of the restorations, by the architect, are carefully done; and, had they been properly executed, would, no doubt, have given much satisfaction. — *Id.*

Kent. Greenwich. — A new pier, to project about 160 ft. into the bed of the river, is in contemplation at Greenwich, and is expected to be both ornamental and useful. Steam packets will land passengers at the end of the pier, which will do away with the dangerous boating. — *Id.*

Lincolnshire. Spalding. — A new workhouse is to be immediately erected at Spalding: the various works have, also, been contracted for. — *Id.*

Middlesex. Stanmore. — The parish church of Stanmore is now closed, for the purpose of thoroughly repairing it: besides painting, decorating, &c., a new roof is to be added. The repairs are under the superintendence of Mr. Bird, surveyor, Kentish Town. — *Tyro. Wilmington Square.*

Nottinghamshire. Newark. — A new church is in contemplation to be erected at Newark. — *Id.*

Somersetshire. Keynsham. — A new workhouse is in contemplation to be erected at Keynsham, near Bristol: it is not yet known whether a favourite is to build it, or if it is to be left to public competition. — *Id.*

Yorkshire. Sheffield. — At the south-west part of the town, near Blonk Bridge, a building, entirely of stone, is about to be erected immediately, which is intended for a circus and theatre. It will be so constructed as to admit of being formed into a circus for equestrian exercise, or dramatic performance, by taking up part of the proscenium, to admit of a ring 42 ft. in diameter. A very spacious green-room and treasury are provided on the ground floor; over these are ladies' and gentlemen's dressing-rooms; and the floor above consists of an extensive property-room, for containing all the paraphernalia of the stage business. Stables, for conveniently containing 12 or 14 horses, are provided under the stage. The height, from the ring to the ceiling joists, is 39 ft.; and the theatre, exclusive of the dressing-rooms, is 60 ft. wide.

The exterior, if erected according to the drawings, will be the most elegant and classical the town can boast of, not even excepting the Cutlers' Hall; and it is highly creditable to the ingenious, tasteful, and talented architect, James Harrison, Esq., Norfolk Row, Sheffield.

The whole extent will be about 80 ft.; with a Grecian Ionic receding portico, raised on a channeled, rusticated basement, with three beautifully proportioned doors, the centre one of which will be upwards of 7 ft. wide, with a neat pediment; the whole having enriched and highly finished truss-supported cornices. The portico, above, recedes some 5 ft. or 6 ft., with two columns upwards of 21 ft. long in antæ; the columns, which are fluted, and the antæ, are from one of the most elaborate examples of the Grecian archi-

fects, with the enriched neckings of the flowing foliage, and the involuted, or spiral, curves of the order. The cornice and frieze are continued along the wings, almost in an unbroken line, and finish with a bold blocking, except the part over the portico, where the blocking is made to form a plinth for an attic, with three neat and tasteful apertures; a neat Grecian cornice, and a blocking over it, complete the composition. There are two stories of windows, which are well arranged for harmony; and they greatly relieve the elevation, which is chaste and simple, and yet eminently imposing. No building in Sheffield will be able to compete with this substantial edifice, either for utility, strength, or beauty. — *G. L. S. Sheffield, April 3. 1838.*

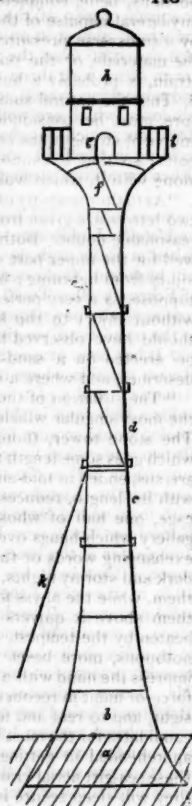
SCOTLAND.

Metallic Lighthouses. — A memoir on this subject has recently been published at Edinburgh, by Mr. Samuel Brown, of which an admirable account will be found, illustrated by a figure, in that excellent newspaper *The Scotsman* of February 20. To all our readers who are interested in the subject we recommend the newspaper, or Mr. Brown's memoir, if it can be procured; but, in the mean time, we give the following short abstract: —

"It has been proposed to place a lighthouse on the Wolf Rock, near Land's End, a position where it would be exposed to the most violent storms of the Atlantic; and a plan was drawn up for the purpose by Mr. Stevenson, who holds a high rank in this department of engineering; which plan, Mr. Brown thinks, would require fifteen years for its execution, and cost 150,000*l.* Mr. Brown undertakes to erect one of bronze, 90 ft. high, which would answer the purpose as well as the stone one of 134 ft. for 15,000*l.*, and to complete it in four months. Lighthouses are generally of masonry, the outer stones clamped with iron, and in large blocks, to lessen the number of joints. The one on the Eddystone Rock, near Plymouth, erected by the celebrated Smeaton, is 24 ft. in diameter at the base, and 90 ft. in height, of which 72 consists of solid masonry. That built by Mr. Stevenson on the Bell Rock, near Arbroath, is 40 ft. in diameter at the base, and 110 ft. in height, of which 102 consists of solid masonry. The defects of such a structure are obvious. In the first place, it consists of some thousand pieces; and, among as many thousand joints in it, a few faulty ones would be fatal to its strength. Secondly, its great breadth presents an enormous surface to the action of the winds and waves. Mr. Brown estimates, from experiments made by him at the extremity of Brighton Chain Pier in a heavy south-west gale, that the waves impinge, on a cylindrical surface 1 ft. high and 1 ft. in diameter, with a force equal to 80 pounds; to which must be added that of the wind, which, in a violent storm, exerts a pressure of 40 pounds. He computes the collective impetus of the wave on the lower part of Mr. Stevenson's proposed lighthouse for the Wolf Rock, of the surf on the upper part, and of the wind on the whole, to be equal to 100 tons. On the bronze column of 90 ft., which Mr. Brown proposed to substitute for the stone structure, the pressure, calculated in the same way, would be only 64 tons. The natural height of the wave in a storm is supposed not to exceed 18 ft. or 20 ft.; but the *surf*, which is, we suppose, half water and half spray, rises, at times, above the head of the Eddystone column, *hooding* the lantern in a watery coat, and sometimes extinguishing the lights. It unfortunately happens, that adding to the height of the column scarcely produces any greater security to the lights; for, as the breadth must be increased with the elevation, the surf, instead of splitting and passing off by the sides, as it would do upon a smaller column, just mounts so much higher, having a greater surface to resist its onward movement. At the Bell Rock, which is not exposed to such heavy seas as the Eddystone, the surf in a storm mounts to the lights, which are 100 ft. above the ordinary level of the sea. At such times, the column is felt to *tremble* when struck by the huge mass of rolling waters; and the keepers, perched like two sea-mews on the top of a beacon staff, with nothing but the raging elements around them on all sides, feel their situation (as they confess) very forlorn, and naturally think of the sins of their past life.

"Fig. 118 is a section of Mr. Brown's proposed metallic lighthouse: it is 90 ft. high, 14 ft. in diameter at the bottom, and 4 ft. at the thinnest part. The lower half, called the base, is in four pieces, each piece consisting of a portion of a hollow cone (or paraboloid), wider below than above, and about 10 ft. high; the lowest piece (*a* *b*) is sunk 3 ft. into the rock, and is 14 ft. in diameter at its under margin; the fourth piece (*g*) is 6 ft. in diameter at top. These four pieces fit into each other, the neck of the lower passing into the socket of the upper, and both being secured by flanges; so that the joints are, in some degree, stronger than the entire part of the shaft. Above these is the smaller part of the shaft, which is in three pieces of nearly the same length, and fitted in the same manner. Above this, the shaft widens out into an inverted cone, which forms one piece, and supports the more important parts. These are, first, the keeper's house (*g*) which is 8 ft. in diameter, and 7 ft. high, with a gallery round it, 'for look-out, and walking exercise.' Next the lantern (*h*) 9 ft. wide and 10 ft. high to the cupola, for containing the lights. The house, or sitting room, is made of two concentric cylinders of sheet copper, 9 in. assunder, to equalise the temperature, and attached to each other by rivets: it is formed into compartments for bookcases, shelves, and lockers, with a recess for the back of the stove. Immediately below the house, in the swell of the shaft *f*, are the sleeping berths. To complete the description of the column, we shall add, that the upper section (*c*) of the base contains two tanks, one for oil, and one for fresh water; the next section (*d*), above, is for coals and provisions; and the one (*e*), above that, a general store. Access is obtained from below by the chain ladder (*k*) reaching down to the sea; and the oblique lines in the sections above (*c*), represent ladders in the inside, by which the keepers mount to their aerial abode. The whole work, 90 ft. high, would cost 16,000*l.* or 17,000*l.*, if entirely of bronze; 11,300*l.*, if the base to *e* were bronze, and the upper part cast iron; or 9000*l.*, if entirely of cast iron; and it would be erected in four months. The form of the shaft will immediately remind many of the elegant cast-iron lamp posts introduced into Edinburgh, some years ago, on the suggestion of Mr. Robison," engravings of one of which are given in our First Volume (figs. 196. and 197. p. 368.).

"The advantages of this plan of Mr. Brown are the following: — 1. The expense of erecting lighthouses is much diminished, so that six may be erected for the sum now spent on one. 2. The time necessary for building them is contracted from years to months; and the chances of loss of life in the progress of the work are proportionably diminished. 3. The bronze lighthouse, from the slenderness of its shaft, and the smallness of the resisting surface, will not carry the wave and spray half so high as the stone lighthouse; and, with two thirds of the elevation, it will afford equal protection to the keepers and the lights. 4. From this slenderness, and its diminished height, the strain of the surge and winds upon it, in a storm, will not exceed one tenth of what a stone structure is exposed to. 5. It has but eight joints from the bottom to the lantern; while the stone lighthouse has thousands; and the bronze joints admit of being made as strong as the entire part of the shaft. 6. That its separate



portions, being complete circles, cast solid, each is, *per se*, capable of resisting any lateral impulse of the water whatever; and the column can only be injured by a transverse pressure operating upon its length. 7. That the cohesion of the materials, or the power of the column to resist fracture by a transverse strain, is probably a hundred times as great as in an equal column of stone. 8. That the natural stability of a bronze column, derived from downward pressure, must be considerably greater than that of stone. In addition to this source of strength, the column is to be secured 10 ft. into the rock by numerous bolts; so that it cannot be removed, without carrying all that body of rock along with it, which would require a pressure of several hundred tons.

"As to the durability of bronze in water, when proper precautions are adopted, two letters are given from Mr. Brande and Mr. Faraday, which remove every reasonable doubt. Both of them think that cast iron might answer sufficiently well for the upper part of the column. Nothing is said about the chances of injury from lightning; but the tower, being entirely metallic, it would act, we suppose, as a very perfect conductor, and convey the electricity to the earth without injury to the keepers. Bronze is an alloy of copper and tin. We should have observed that, in Mr. Brown's opinion, a bronze column could be erected on a sand-bank, by piling, or by a different process, which he describes, and where a stone structure would be impracticable.

"The situation of the keepers in one of Mr. Brown's lighthouses is one of the most singular which the multifarious occupations of human life present. The stone tower, though really less secure, has an appearance of solidity, which goes some length to satisfy the imagination; but Mr. Brown's watchmen are suspended in mid-air, on the top of the pillar, whose slenderness, compared with its length, reduces it to the appearance of a small rod. Cooped up in a cage, one half of whose narrow floor projects over the sea, or standing on a gallery which hangs over it completely, they live for months together without exchanging words or thoughts with their fellow mortals. There they pass the dark and stormy nights, with the winds howling, and sea birds shrieking around them, while the abyss foams and rages below, and the slender stem that bears them above it quivers under their feet when struck by the angry surge, or beaten by the tempest. No situation can be conceived more dismal and monotonous, more beset with terrifying circumstances, or better calculated to impress the mind with a constant feeling of insecurity. Such, however, is the force of habit in reconciling men to outward circumstances, which appal at first sight, and to real and formidable dangers too, that there is never any want of candidates for the most hazardous employments; and no difficulty is, we believe, apprehended in getting sober considerate persons to commit themselves to these sea-girt aerial cradles; nor any doubt felt, that, after a month's experience they will sleep secure in them, though lullabied by storms and tempests, the aspect of which, in such a situation, would drive a greenhorn landsman mad.

"To understand the importance of lighthouses, it may be proper to state, that the number of British vessels shipwrecked annually is about 550, or *one and a half per day*. The average burden per ship of the mercantile navy is about 110 tons; and, if we value old and new together at half the price of building, or 5*l.* 10*s.* per ton, we have 600*l.* for the value of each, and 330,000*l.* for that of the whole; which may be reduced to 300,000*l.* by deducting the value of sails, masts, and other materials, saved from some of those stranded. If we add an equal sum for the value of the cargoes, the whole loss from shipwrecks will be 600,000*l.* per annum. This statement proceeds on an old estimate from 1793 to 1829; but Mr. Maculloch says, in the *Supplement to his Dictionary*, that the number of ships lost, or driven on shore, in 1833, was no less than 800. It is probable, then, that the annual loss by shipwreck is not much short of a million sterling. If one fifth part of this loss could be prevented by additional lighthouses, the saving in money would amount to a million in five years, to say nothing of the still more important saving in human life." (*Scotsman*, Feb. 20. 1836.)

ART. II. Retrospective Criticism.

Mr. THOMPSON'S Designs for the New Houses of Parliament. (p. 178.)—I have to regret a want of candour in the few remarks made by your able reviewer, B., on my humble work, especially in regard to the perspective views not being done by a mere carpenter's hand. This remark, from an unsuccessful competitor, does me infinite credit; and, as he acknowledges a want of time prevented him from understanding the entire arrangement of the set of designs, I would respectfully suggest to him the careful perusal of the second article in your Magazine for April, called "Architectural Pedantry," by Candidus. (See p. 149.) Your own objections are merely a matter of opinion, as "the confusion in the parts, arising from the want of a sufficiently striking leading feature," which you complain of, others may, and actually have, considered an advantage.

There is one point in your reviewer's remarks which I feel bound to explain to you: I allude to his objection to "a passage 340 ft. long, with only one window at each end." In his haste, he has evidently omitted to notice the distribution of light from the two large staircases; also from a window in the west front; and again from the window over the water-closets fronting the courtyard. A distinguished architect has awarded me great praise for the very efficient manner in which the entire building receives its lights. No. 17. is a store-room for papers to the Vote Office; No. 18. is an office attached to the Private Bill Office; No. 19. is a door-keeper's dressing-room; and No. 20. an office belonging to the Commons' Serjeant-at-arms' official residence. These rooms, I humbly conceive, although receiving only secondary, or borrowed, lights, are yet amply lighted for their respective purposes.

As I before stated, and as is inserted in the titlepage of my book, I do not pretend to be any thing more than a mere working carpenter; but your reviewer has looked at my humble work as the production of a professional man. I was not aware that the introduction, in an immense pile of architecture, of a varied form and style of windows, was against architectural taste. I may be wrong; but my idea is, that the entire architectural building within observation of the eye should please as a whole; and that the eye should not rest on any particular portion, until the mind has embraced the entire building. What, I may be allowed to ask, is the objection to an oriel window, 10 ft. wide, uninterrupted by mullions? Is it simply because it has never been before executed that it is considered objectionable? The seven windows to the two porticoes are 5½ ft. from mullion to mullion (a greater width than has ever been executed); and they were introduced purposely, in order to prevent the building from having an ecclesiastical appearance. I have endeavoured to avoid, as much as possible, the appearance of either ecclesiastic or castellated architecture; and, on this account, I have been sparing in the introduction of mullions, and also of battlements.

With regard to the doubt of the capability of my design being erected, save in wood; this, no doubt, is in allusion to my trade; as, in a former letter to you, I expressed an opinion that not a fibre of wood ought to be used in its erection, save for scaffolding.

(In justice to our reviewer, we must observe, that he never saw Mr. Thompson's letter to us; and that we do not believe he had the slightest idea of making any allusion to Mr. Thompson's trade by his remark, which had merely reference to what he considered the impracticability of executing some parts of the design in stone.)

The pendants, in the House of Commons, complained of, are perforated ventilators. I have drawn an interior pencil sketch of this House, showing their construction; and, should your reviewer be passing this way, I should feel proud in having the honour of submitting it to his inspection; by which means, I trust, he would be induced to give the "carpenter" credit for his perspective views.

Trusting that, in thus going through my explanation, you will excuse my trespassing on your valuable pages, I have only to add, that I do feel proud in having had the opportunity, afforded by a liberal Government, of sending in a set of designs for a proposed new House of Parliament; and when I see myself, by you, held up as an example for others to follow, by the publication of their designs, I do consider, humble individual as I am, that it may be an era the profession (to which I have not the least pretension to belong) may be justly proud of.

Not having yet seen the exhibition, at the National Gallery, of the 78 sets of designs now exhibiting, I confess my surprise at your approval of only one, and that one having a spire surmounted by a statue. I may be wrong in my taste, but I never catch a glimpse of the statue on the spire of Bloomsbury church, without smiling at its absurdity. Mr. T. L. Donaldson is a gentleman of acknowledged taste, and one that I entertain a high respect for, having done works under him at various times.

My anxious desire is to see a national building erected; and, in my opinion, it matters little where may be its site; whether on the old, or in conjunction with St. James's Palace, or in the vicinity of Leicester Square: but let us have one that will do us credit. — *Peter Thompson, Carpenter and Builder, 3, Osnaug Place, New Road, April 4, 1836.*

Design for a Labourer's Cottage. (p. 120.) — In the details of this design, your correspondent directs (p. 127.) that, "each sash is to open, and to have a strong eye and hook to fasten it when closed." The following is a very good plan of fastening similar windows; and has, I believe, never failed in making dwellings both wind and water tight: — Provide and fix to each sash two 6 in. square neat bolts, to shoot into the sash-frames, top and bottom. *Tyro. Wilmington Square, April 2, 1836.*

G. B. W.'s Truss. (p. 142.) — G. B. W. tells you he writes in haste to reply to my observations on his roof; and I am sure I need not tell you that he also writes in anger; and I shall begin by telling him that a "combination" of haste and anger will form but a sorry truss to support an argument. If G. B. W. still sees "no reason why the queens should not be the principal support of the truss," I cannot help it. I still think it better to avoid making them so, for reasons stated in my former communication on the subject (see p. 95.). But mark how ingeniously he disposes of his lower king-post; that self-same king-post, too, the support of which, alone, I considered objectionable. Why he coolly says, if the span "were less, it might be dispensed with entirely;" premising the observation by stating that he "introduced the lower king-post truss for additional strength." Yes; were the span less, no doubt the whole of the truss might be dispensed with entirely. I now "turn to Nicholson's Carpentry," according to the friendly advice of G. B. W., to examine the roof of old Drury Lane Theatre; and will venture to tell him that the queen-posts he there, speaks of have nothing to do with the support of that roof. Why, if the queen-posts had never been placed there, the roof itself would have remained entire as long as the materials of which it was composed endured; they (the queens) being placed there, unquestionably, for the support of the beams and floors below, which were strapped and bolted to them; the principal braces, and the straining beam, alone, forming the most simple and complete abutment truss for the support of the roof above. But, before I lay by our good friend Nicholson, I would refer G. B. W. to fig. 3. p. 656. (I have his *Architectural Dictionary* before me); he will then see a roof in principle precisely the same as his own, only there the queens derive the whole of their support from the king, instead, as in G. B. W.'s design, the king from the queens. I will quote, verbatim, Nicholson's opinion of this design. It runs thus: — "But so many joggles are certainly an objection to this method; as the shrinking of the timber must be very considerable in three breadths, which would allow the roof to descend."

It would also seem that I do not stand alone in my opinions; for your able correspondent, Mr. Thomas Cook, has ventured to think with me, that

G. B. W.'s truss is "not the best that could be constructed;" and he has gone much farther than I did; for I only ventured to suggest an improvement in G. B. W.'s truss, but he has really told him he knows nothing at all about one. — *William Coles. Winchester, March 7. 1836.*

Drains and Traps (Vol. II. p. 179. and 330.) — Your correspondent, Mr. Milne, has favoured the readers of the *Architectural Magazine* with an article on the importance of perfect drainage to a house (Vol. II. p. 179.); and, as this can in no case be complete without one or more traps, has given the section of one (fig. 99.), which I believe to be the form adopted by workmen in nine cases out of ten (no bar to the introduction of an improved one, you will say), let the form of the drain be what it may. The principle of this trap is criticised by another correspondent (p. 330.) who signs himself A Junior; but whom I should judge, from his criticism, not to be a practical man. He also gives a section of his trap (p. 330. fig. 167.).

Speaking of Mr. Milne's trap, A Junior says, "to my mind would lead astray, rather than assist, a tyro;" and in explanation of his own section (Vol. II. p. 330. fig. 167.), he says, "Care should be taken that the dip-stone (a) should not touch the cover (b) within half an inch, in order that a current of air may pass to allow the water and soil to flow through the trap and drain. This latter point is that to which I wish to call your attention, as the article before referred to does not show this, or mention the subject of its construction."

These traps, I would inform A Junior, serve the double purpose of stopping the progress of vermin, and checking the stench, which would otherwise ascend from the main drain, or the cesspool, and infect the house; and hence they are called by workmen *stink-traps*. But how he would accomplish either of these objects with his trap, I am at a loss to conceive; for he requires that "the dip-stone (a) should not touch the cover (b) within half an inch;" a space sufficient to let stench enough pass to taint a dozen houses. But his greatest anxiety seems to be "the prevention of vermin;" and here, again, he is equally at fault: the dip-stone of the trap is intended to cheat the vermin, i.e. the rats (no easy matter, every one will say who knows any thing of the habits of these artful pests). But let us for a moment suppose a full-grown one arriving for the first time at this barrier, as constructed on the principle of A Junior: he will soon perceive there is a region beyond this to be explored, and forthwith sets about finding out the hidden pass: his first aim will be at the half inch space above; being foiled there, he will swim about on the surface of the water for a time; then away he dives under the water; and, having once made his way beneath the dip-stone, repeats the passage, with his companions, without let or hindrance, as often as inclination leads them that way.

That the writer has some knowledge of the subject, is evident from his remarks on the construction of this drain, and form of the bottom of the trap; which is decidedly an improvement upon that of Mr. Milne.

I shall take the liberty of adding a few hints on the subject, gathered from my own experience; but, if I am in error in my conclusions, I hope to stand corrected.

It is very essential that the drain, of whatever form it may be, should be well constructed, and of hard materials; and, where this is the case, there will be no fear of vermin breaking into it through its sides; it will, therefore, be only necessary to guard its extremities. For the entrance of all house drains I would recommend a cast-iron trap: these are made in a variety of forms and sizes, and should be fixed in stone-paved floors, with the top nearly flush, but sunk a little below the surface of the floor: they may be taken out and cleaned with very little trouble, when requisite. For the opposite end, in ordinary cases, let there be an iron grating, with the bars just sufficiently close to exclude a rat. Where, however, a trap built in the drain cannot be dispensed with, as in the case of a drain taking the soil from a water-closet, let it be made where it is easy of access, in order that it may be cleared out occasionally; for it must necessarily, in some measure, per-

form the office of a cesspool, and the sediment passing down the drain will be deposited therein; by which means it will, in time, if not emptied, stop up the drain as effectually as if the dip-stone touched the bottom as well as the top: the tendency to deposit will, of course, be less when the bottom of the trap is concave, instead of flat: still there will be a deposit. Let the dipping piece, which may be either of stone, slate, tile, or other hard material, be worked firmly into the sides of the trap, and not only touch the cover stone, but be made air tight to it with a joint of mortar, which will in nowise prevent the water and soil from flowing as freely as though the space of half an inch were left between them. — Z. Hertford, Dec. 12. 1835.

ART. III. *Institute of British Architects.*

APRIL 25. 1836. — P. F. Robinson, V. P., in the chair. The minutes of the last meeting were read and confirmed. The balance in the treasurer's hands appeared to be 217l. 0s. 11d. John Shaw, Fellow, having attended for the first time since his election, was admitted by the chairman. Anthony Salvin, Architect, of Somerset Street, Portman Square, was balloted for, and declared to be unanimously elected. Frederick Catherwood, Architect, being about to leave England for America, was elected Honorary and Corresponding Member, during his absence. Monsieur Beuth, His Prussian Majesty's Privy Counsellor, and Director of the Institute of Arts and Sciences at Berlin, was elected Honorary and Corresponding Member, agreeably to the recommendation of the Council.

The intention of Mrs. Parke to present the collection of the sketches made by the late Henry Parke, Esq., Architect, in Italy, Sicily, and Egypt, to the Institute, to be preserved in perpetuity, was communicated to the meeting.

A letter from Mr. Colquhoun, Agent and Consul-General of the Hanse Towns, was read; in which he proposed that facilities should be afforded to architects from Lubeck, Bremen, and Hamburg, visiting London, upon a recommendation from him to the secretary of the Institute; provided similar facilities be afforded to architects visiting the Hanse Towns by the authorities there. The same might also be observed with respect to subjects of the King of Saxony, whose Consul General Mr. Colquhoun is. A letter was read from Sir J. C. Hobhouse to Earl de Grey, the President, acknowledging the receipt, and respecting the transmission, of letters of election to the King of Oude and the Rajah of Tanjore. A letter from Archdeacon Froude of Totness, Devon, in acknowledgment of his election as Honorary and Corresponding Member, was also read.

The following donations were announced as having been received since the last ordinary meeting: — Mr. Dipple, of Richmond, thirteen specimens of marble, and a communication thereon; Thomas Sopwith, Esq., Treatise on Isometrical Drawing; History and Description of Fountain's Abbey, York; Account of All-Saint's Church, Newcastle; D. Mocatta, Esq., Architect, copper medals, representing various buildings; F. Catherwood, Esq., Architect, Honorary and Corresponding Member, section drawing, 11 ft. long, of the Raffael Loggia of the Vatican, by Rossi, Rome, 1754; A. Poynter, Fellow, two fragments from the Treasury of Atreus at Mycenæ; one fragment of the truncated angle of a tripodal pedestal; two fragments of enriched cornices, and one small one of a draped figure; W. S. Inman, Fellow, cast of the lion's head, from the Parthenon, Athens, from the frieze of the Temple of Tivoli, &c.

A communication was read from Monsieur Brûnël, announcing that he had at length broken his experimental pier by the accumulation of weight, ultimately, to the amount of 12 tons 1 cwt. 1 qr. 5 lb. Fragments of the construction at the points of fracture accompanied the communication. It appeared that, out of the eleven bars, or hoops, which had been introduced in the entire of the brickwork, three only were broken asunder. The others were all entire, being stretched or drawn only at the average of 18 in. on either side of the last, or principal, crack; and at the other crack about 3 in.; which, upon

breaking up the wall, was clearly indicated by the drawn marks of the iron upon the cement.

A letter was read from P. Legh, Esq., Honorary Fellow, about the accident which had occurred to the suspension bridge near Wakefield, Yorkshire, accompanied by a print.

Mr. Inman, Fellow, explained the nature of the building, and construction of the retort-house, of the South London, now Phoenix, gas works, Bankside; also of the roof of the infirmary of Christ's Hospital, and other buildings; and of the use of iron in the construction of conservatories. Adjourned.

May 2.—Earl de Grey, President, in the chair. This was the general annual meeting of the Society.

Mr. Donaldson, the secretary, read a letter from Sir John Soane, regretting his inability, on account of indisposition, to attend the meeting. Mr. Goldcutt, secretary, read the list of donors and benefactors to the Institute during the past year. Mr. Robinson, V. P., read the report of the Council, drawn up by him at their request.

The thanks of the members having been presented to the Council for their able exertions in promoting the views and interests of the Institute, the meeting proceeded to the election of officers for the ensuing year. His Lordship was unanimously requested to continue his important support to the Society, by continuing to act as President; to which His Lordship was pleased to assent. The following were elected as members of the Council:—Vice-Presidents, Messrs. Barry, Papworth, and Robinson; Honorary Secretaries, Messrs. Donaldson and Fowler; ordinary members of Council, Messrs. Basevi, Goldcutt, Kendall, Moore, Newman, Rhodes, and Wallace; Auditors, W. S. Inman and A. Burton. Adjourned.

May 9.—J. B. Papworth, V. P., in the chair. The minutes of the last meeting were read. A letter from Mr. Basevi, begging to be excused from acting for another year as member of the Council, having been read, as also a recommendation for the Council that the vacancy should be declared, and that an election of another Fellow to succeed him should take place, it was resolved that the recommendation be approved. In consequence of a recommendation from the Council that C. R. Cockerell, R. A., should be elected Honorary Fellow, upon payment of the usual contribution, the members proceeded to the election, and Mr. Cockerell was declared unanimously elected.

The following donations were announced as having been received since the last Meeting:—Mr. Dipple, Mason, Richmond, specimens of marble; Messrs. Ackerman, Pugin's designs for gold and silversmiths; Messrs. Jackson, drawings of composition ornaments; A. Burgess, Esq., four prints of old and new Bow Bridge; Monsieur Châteauneuf, various numbers of *The Museum*, a German periodical, containing the series of questions published by the Institute, translated into that language; and a German work by Müller (see p. 173.): I. J. Scales, Fellow, bronze medal, struck in commemoration of the suspension bridge erected at Ya mouth by him, and a copy of the chart of the Nile laid down from observations taken by him and Mr. Parke; Edward Nolan, Esq., cast in plaster prepared by a peculiar process; J. Britton, Esq., drawing of a parqueted floor formerly existing in the quarter space of the staircase of the Institute; various copies of *Frazer's Literary Chronicle*, by the editor; G. Godwin, Associate, printed copy of his *Essay on Freemasons*, read at the ordinary meeting, 14 March. (See p. 193.)

A communication was read from Monsieur Châteauneuf, upon the several editions of Vitruvius existing in the public library at Hamburg; and a paper from T. L. Donaldson, Honorary Secretary, upon those preserved in the library of St. Marc, at Venice. A letter was read from Mr. Dipple, Richmond, explanatory of various specimens of marble presented by him to the Institute. T. L. Donaldson, Honorary Secretary, read a paper upon composition in architecture. Charles Fowler, Honorary Secretary, read a description of a mode adopted by him to construct terrace floors.

The thanks of the members having been presented to the writers of the several papers, the meeting adjourned.